'86 ontario road safety annual report

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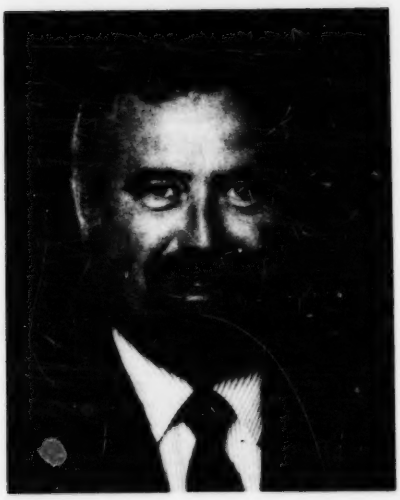
minister's message



Ed Fulton

This year, the Ontario Road Safety Annual Report has been enhanced with a broader range of information. Since road safety is a multi-faceted field and concerns not only the Ministry of Transportation and Communications but other ministries, police forces and private sector organizations, we have incorporated information provided by the Ministries of Health and Attorney General. This will serve to broaden the road safety perspective and we look forward to inviting other organizations to provide relevant data in coming years.

Alcohol use continues to figure prominently in highway accidents. In the overview section of the book, we summarize findings from the roadside BAC (Blood Alcohol Concentration) survey conducted last summer by MTC, the Attorney General, Solicitor General, Transport Canada and the Addiction Research Foundation.

This study examined the drinking/driving picture in depth by selecting drivers across the province and asking them to answer a number of questions and agree to take part in a roadside breath test. The findings indicated there is still much to be done to remove impaired drivers from Ontario's highways.

1986 figures indicate a continuing downward trend in the number of persons killed. Specifically, there were 1,102 killed in motor vehicle accidents as opposed to 1,191 in 1985, a 7.5 percent decrease. In fact, 1986 had the lowest number of motor vehicle fatalities since 1954. Personal injuries and property damage accidents were also down slightly. While this picture is encouraging, I believe the numbers of accidents remain too high and our efforts in this area must continue.

In 1986, MTC undertook several initiatives aimed at improving road safety. Among them was the development of promotional and educational programs and the introduction of legislative changes. However, without a corresponding change in people's attitudes, they can only be partially successful. With a view to supporting and encouraging the promotion of highway safety, the Community Highway Safety Office was formed in November, 1986. I am confident staff will develop initiatives conducive to a more positive public approach to highway safety.

Ed Fulton

Ed Fulton
Minister of
Transportation and Communications

table of contents

		Contents	Page
		Minister's Message	**3**
		List of Tables and Figures	**5**
Section	**1**	**The Overview**	**7**
	1A	**Synopsis**	**8**
	1B	**Selected Characteristics of Motor Vehicle Accidents in 1986**	**9**
	1C	**Perspectives on Highway Safety**	**10**
Section	**2**	**The People**	**15**
	2A	**People in Accidents**	**16**
		Persons Killed and Injured	16
		Drivers	19
		Alcohol	20
		Driver Action	21
		Seat Belts and Child Restraints	22, 23
		Pedestrians	23
	2B	**Putting the People in Context**	**24**
		Injury Rates	24
		Driver Population	24
Section	**3**	**The Accident**	**29**
	3A	**Types of Accidents**	**30**
		Accident Class and Rates	30
	3B	**Time and Environment**	**32**
	3C	**The Accident Location**	**35**
Section	**4**	**Place of Accident in Ontario**	**37**
		Geographical Location — Estimated Population, Accident Information and Vehicle Registration	38
Section	**5**	**The Vehicle**	**47**
	5A	**Vehicles in Accidents**	**48**
		Vehicle Type	48
		Condition, Model year, Insurance Status	51
	5B	**Putting the Vehicle in Context**	**52**
		Vehicle Population	52
Section	**6**	**Vehicles of Special Interest**	**53**
	6A	**Motorcycles**	**54**
	6B	**School Vehicles**	**55**
	6C	**Trucks**	**56**
	6D	**Off-Road Vehicles**	**57**
	6E	**Motorized Snow Vehicles**	**58**
Section	**7**	**Conviction and Suspension Data**	**59**
	7A	**Conviction Data**	**60**
	7B	**Suspension Data**	**61**
Section	**8**	**Appendix**	**63**
	8A	**Glossary of Terms**	**63**
	8B	**Ministry of Transportation and Communications Highway Safety Publications**	**64**

list of tables and figures

Table	Title	Page
2.1	Category of Involved Person by Severity of Injury 1986	16
2.2	Category of Persons Killed by Age Groups 1986	17
2.3	Category of Persons Injured by Age Groups 1986	18
2.4	Sex of Driver by Class of Accident 1986	19
2.5	Driver Condition by Class of Accident 1986	19
2.6	Driver Age by Driver Condition in All Accidents 1986	20
2.7	Recorded Occurrence of Alcohol in Drivers Killed 1986	20
2.8	Apparent Driver Action by Class of Accident 1986	21
2.9	Severity of Driver Injury by Seat Belt Usage 1986	22
2.10	Severity of Passenger Injury by Seat Belt Usage 1986	22
2.11	Restraint Use for Children Killed 1982-1986	23
2.12	Restraint Use for Children Injured 1982-1986	23
2.13	Pedestrian Condition by Severity of Injury 1986	23
2.14	Apparent Pedestrian Action by Severity of Injury 1986	23
2.15	Category of Persons Killed and Injured 1977-1986	24
2.16	Sex of Driver Population by Age Groups 1986	24
2.17	Driver Population Age Groups 1977-1986	25
2.18	Driver Licence Class by Sex 1986	25
2.19	Licensed Drivers, Total Accidents, Persons Killed and Persons Injured 1931-1986	26, 27
2.20	Original Licences Issued 1982-1986	27
2.21	Temporary Licence Permits Issued for Class L's and Class R's 1982-1986	27
2.22	Driver Age Groups — Number Licensed, Accident Involvement and Per Cent Involved in Accidents 1986	28
3.1	Class of Accident 1977-1986	30
3.2	Accident Rate Per One Million Kilometres Travelled 1977-1986	30
3.3	Accident Involving Motor Vehicle by Class of Accident 1986	31
3.4	Initial Impact by Class of Accident 1986	31
3.5	Month of Occurrence by Class of Accident 1986	32
3.6	Day of Week by Class of Accident 1986	33
3.7	Hour of Occurrence by Class of Accident 1986	33
3.8	Statutory Holidays, Holiday Weekends — Fatal Accidents, Persons Killed and Persons Injured 1986	34
3.9	Light Condition by Class of Accident 1986	34
3.10	Visibility by Class of Accident 1986	34
3.11	Road Jurisdiction by Class of Accident 1986	35
3.12	Road Jurisdiction for All Accidents 1977-1986	35
3.13	Road Location by Class of Accident 1986	36
3.14	Road Surface Condition by Class of Accident 1986	36
4.1	Place of Accident — Estimated Population, Class of Accident, Persons Killed, Persons Injured and Vehicle Registration 1986	38, 46
5.1	Type of Vehicle by Class of Accident 1986	48, 50
5.2	Condition of Vehicle by Class of Accident 1986	51
5.3	Model Year of Vehicle by Class of Accident 1986	51

Table	Title	Page
5.4	Insurance Status of Vehicle by Class of Accident 1986	51
5.5	Vehicle Population by Type of Vehicle 1986	52
5.6	Selected Types of Vehicles by Model Year 1986	52
6.1	Motorcyclists Killed and Injured 1982-1986	54
6.2	Selected Factors Relevant to Fatal Motorcycle Accidents 1986	54
6.3	Pupils Transported Daily, Total Accidents and Injury Rate Per 100,000 Pupils — School Years 1981/82-1985/86	55
6.4	School Vehicle Type by Nature of Accident 1985/86	55
6.5	Pupil Injury by Accident Event and Vehicle 1985/86	55
6.6	Class of Truck Accident 1982-1986	56
6.7	Driver Licence Class Required by Class of Truck Accident 1986	56
6.8	Driver Licence Class Required — Accidents, Registered Trucks and Accident Rate 1986	56
6.9	Selected Factors Relevant to Truck Accidents 1986	56
6.10	Accident Location by Off-Road Vehicle Drivers Killed and Injured 1983-1986	57
6.11	Accident Location by Off-Road Vehicle Passengers Killed and Injured 1983-1986	57
6.12	Registered Off-Road Vehicles 1984-1986	57
6.13	Selected Factors Relevant to All Off-Road Vehicle Accidents 1986	57
6.14	Accident Location by Motorized Snow Vehicle Drivers Killed and Injured — Riding Seasons 1981/82-1985/86	58
6.15	Accident Location by Motorized Snow Vehicle Passengers Killed and Injured — Riding Seasons 1981/82-1985/86	58
6.16	Registered Motorized Snow Vehicles 1982-1986	58
6.17	Selected Factors Relevant to All Motorized Snow Vehicle Accidents 1985/86	58
7.1	Summary of Motor Vehicle Related Convictions 1986	60
7.2	Motor Vehicle Convictions Related to the Highway Traffic Act 1986	60
7.3	Motor Vehicle Convictions Related to the Criminal Code 1986	60
7.4	Mandatory Suspensions Related to Criminal Code Convictions Issued 1986	61
7.5	Mandatory Suspensions Related to Criminal Code Convictions at Year End 1986	61
7.6	Demerit Point Suspensions by Driver Age 1986	62
7.7	Criminal Code Suspensions by Driver Age 1986	62

Figure	Title	Page
2.1	Persons Killed 1977-1986	16
2.2	Persons Injured and Severity of Injury 1977-1986	17
2.3	Per Cent of Total Persons Killed by Age 1986	17
2.4	Per Cent of Total Persons Injured by Age 1986	18
2.5	Per Cent Driver Condition in Fatal Accidents 1977-1986	19
2.6	Per Cent Driver Condition in Personal Injury Accidents 1977-1986	20
2.7	Per Cent Recorded Alcohol Occurrence in Drivers Killed 1977-1986	20
2.8	Per Cent of Licensed Drivers Involved in Accidents by Age 1986	28
3.1	Accidents by Season of Occurrence and Class of Accident 1986	32
3.2	Light Condition for All Accidents 1986	34
3.3	Visibility for All Accidents 1986	34
3.4	Road Location for All Accidents 1986	36
3.5	Road Surface Condition for All Accidents 1986	36
6.1	Registered Motorcycles and Licensed Motorcyclists 1977-1986	54

1 overview

1a. synopsis

In 1986 approximately 5.6 percent of Ontario drivers and 6.1 percent of registered Ontario vehicles were involved in motor vehicle accidents.

There were 187,286 reported accidents involving 347,998 individual vehicles. Of these accidents, 951 resulted in the death of at least one person while 73,703 accidents caused some sort of personal injury.

In terms of fatalities, 1,102 people were killed on Ontario roads in 1986. Another 108,839 people were injured. Of the people killed, 511 were drivers of passenger or commercial type vehicles, 289 were passengers in such vehicles, 99 were motorcycle operators and 15 were motorcycle passengers. Other types of road users, for example bicyclists, accounted for the remaining 35 fatalities.

Male drivers were involved in 82% of fatal accidents and 69% of personal injury accidents.

In 27% of all fatal accidents the involved drivers were either legally impaired or had been drinking while in personal injury and property damage accidents the percentage of alcohol involved drivers was 7% and 4% respectively.

The age group with the most deaths was the 25-34 year old category followed by the 21-24 year old group. The number of deaths in these groups was 192 and 159 respectively.

Selected Statistics

Total Reportable Accidents	187,286
Fatal Accidents	951
Personal Injury Accidents	73,703
Property Damage Accidents	112,632
Persons Killed	1,102
Drivers Killed	610
Drivers Killed (Impaired or Had Been Drinking)	286
Passengers Killed	304
Pedestrians Killed	153
Other Road Users Killed	35
Persons Injured	108,839
Estimated Ontario Population (1986)	9,181,900
Licensed Drivers	5,817,799
Registered Vehicles	5,421,220
Estimated Vehicle Kilometres Travelled (in millions)	68,465
Estimated Property Damage	$583,938,134
Number of Persons Killed in Motor Vehicle Accidents per 100,000 People in Ontario	12.0
Number of Persons Killed in Motor Vehicle Accidents per 100 Million Kilometres Travelled	1.6
Accident Rate per 100 Million Kilometres Travelled	273.6
Fatal Accident Rate per 100 Million Kilometres Travelled	1.4

1b. selected characteristics of motor vehicle accidents in 1986

Persons Killed
An encouraging downward trend in terms of the number of people killed continued in 1986. The number of fatalities dropped from 1985 and remains in the 1,100 to 1,200 range which started in 1982. Even though the Ontario population continued to grow and the number of licensed drivers has increased each year, the 1986 fatality total of 1,102 is the lowest number recorded since 1954.

Persons Injured
In 1985 the number of personal injuries reported rose sharply. This higher level was sustained in 1986 as the number of reported injuries was comparable to the 1985 figures.

In 1985, the sharp rise in the number of personal injuries was attributable to a significant increase in the reports of minimal injuries while the number of minor and major injury reports were comparable to previous years. In 1986, reports of minimal injuries increased again.

Over a ten year period, the level of minor and major injuries has fluctuated slightly within the 30,000-40,000 range. In this same period minimal injuries varied somewhat in the 45,000 to 52,000 range. In the last two years, however, the numbers of minimal injuries reported have exceeded the 60,000 level.

Driver Age
Driver inexperience seems to be a factor in accidents. Drivers between the ages of 16 and 20 had the greatest number of accidents relative to their representation in the driver population. The percentage of drivers involved in accidents began to decrease after the age of 20 and continued gradually downward with an increase starting again for drivers over age 75.

Driver Action
In approximately 44 percent of accidents the involved drivers were driving properly. Of the drivers who were not driving properly, the most common errors were failure to yield the right-of-way, speeding, loss of control and following too close. Speeding was the most common error in fatal accidents.

Class of Accident
Since 1977 there has been a general trend downward in the number of fatal accidents until in 1986 there were 951 fatal accidents, the lowest number in ten years.

As well, property damage accidents reached the lowest level in ten years in 1986 with a total of 112,632.

However, personal injury accidents remained at a level similar to 1985 which was the highest number in a ten year period. This is tied to increases in reports of minimal personal injuries referred to previously.

Generally, motor vehicle accidents involved collisions with moveable objects, occurred in winter months, happened with equal frequency on Friday, Saturday and Sunday and occurred in daylight conditions. However, fatal accidents showed characteristics which deviate from this pattern.

Alcohol Involvement
Alcohol involvement continues to be a factor in accidents but particularly fatal accidents. In the late seventies and early eighties in accidents where drivers were killed, the drivers were found to be alcohol involved more often than they were found to have a normal condition. One encouraging sign for those working against the Drinking/Driving problem is that since 1984 this had changed and less than one half of the drivers killed have been found to be alcohol involved.

The involvement of alcohol in accidents is not only a concern in regard to motor vehicle drivers but also for off-road vehicle operators, snowmobilers and pedestrians.

1c. perspectives on highway safety

Drinking and Driving in Ontario
Contributed by Safety Coordination and Development Office, Ministry of Transportation and Communications.

During June and July of 1986, the Ministry of Transportation and Communications was involved in a roadside survey of drivers. The survey was conducted under the direction of an interministerial committee which included MTC, Transport Canada, the Addiction Research Foundation, the Ministry of the Attorney General and the Ministry of the Solicitor General.

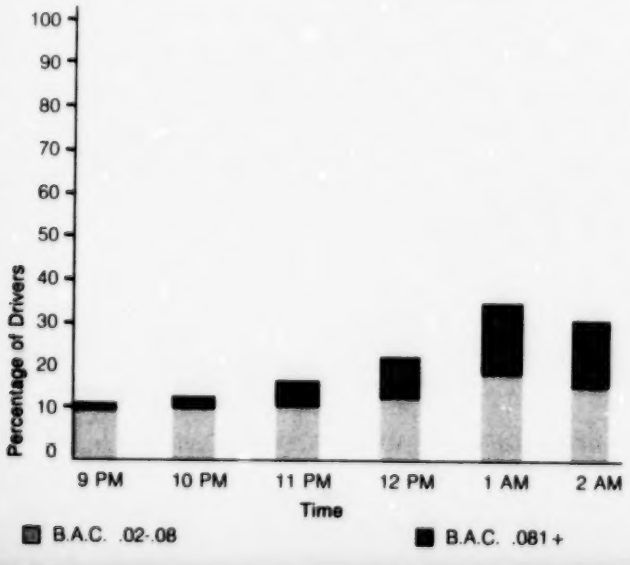
Over 12,000 cars, light trucks and motorcycles were stopped between 9:00 p.m. and 3:00 a.m. on Wednesday to Saturday nights at 289 sites throughout Ontario. The drivers of these vehicles were asked to answer several questions and provide a breath sample. Information was obtained about the nature of that evening's trip, the driver's age, the driver's sex, and the driver's opinions on seat belt use, drinking/driving legislation and personal drinking habits. The breath sample was obtained to determine the driver's blood alcohol concentration (B.A.C.) level.

The data collected in the roadside survey showed that 1 out of every 18 drivers (5.5%) who provided a breath sample had a B.A.C. reading over the legal limit of .08. One in 5 (19.7%) drivers surveyed had some trace of alcohol in their system.

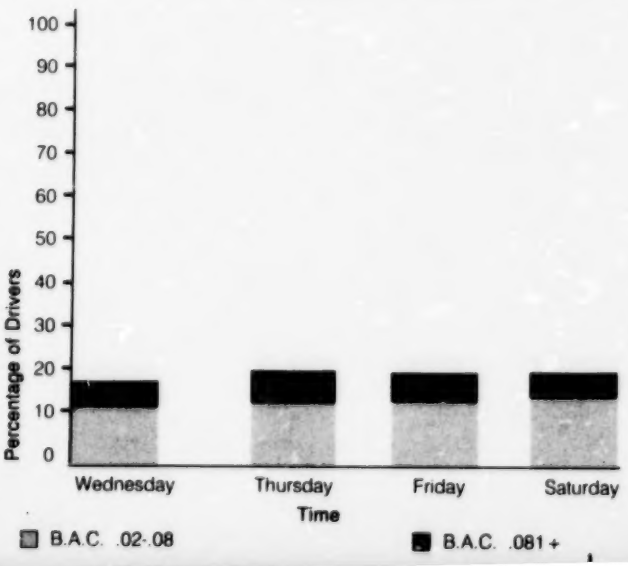
As one might expect, drivers on the road after midnight on Fridays and Saturdays were found to have higher blood alcohol concentrations and were more frequently legally impaired. The peak time for legally impaired drivers was at approximately 1:30 a.m.

Results from roadside surveys and tabulation of alcohol involved accidents present two differing perspectives on drinking and driving. The two perspectives cannot be directly compared because the infomation is obtained in two very different manners but they both provide insight into the problem.

Driver B.A.C. by Time of Day
Roadside Survey — 1986



Driver B.A.C. by Day of Week
Roadside Survey — 1986



When the frequency of alcohol involved drivers (had been drinking and ability impaired, alcohol) in fatal accidents is examined similar patterns to those found in the roadside B.A.C. survey emerge. When fatal accidents were examined it was found that the peak time for alcohol involved drivers is between 1 and 2 o'clock in the morning. In 1986 72.4% of drivers in fatal crashes between 1 a.m. and 2 a.m. had either been drinking or were legally impaired. This one hour period had the largest proportion of alcohol involved drivers of any one hour period.

As mentioned above, the roadside survey found higher numbers of drinking drivers on Friday night/Saturday morning and Saturday night/Sunday morning. Similarly, the examination of fatal crashes found a predominance of the crashes occurred on Saturdays and Sundays. In 1986 39.1% of fatal crashes on Saturday and 35.3% of Sunday fatal crashes were alcohol involved. Drivers in fatal crashes on these two days were more likely to be alcohol involved than on any other day.

Single motor vehicle crashes are often used by highway safety researchers to estimate the extent of the drinking/driving problem. Using single vehicle accidents eliminates the effect of a second driver in the outcome of the accident. In 1986, 91.0 percent of the drivers in fatal, single vehicle accidents between 1 a.m. and 2 a.m. were alcohol involved.

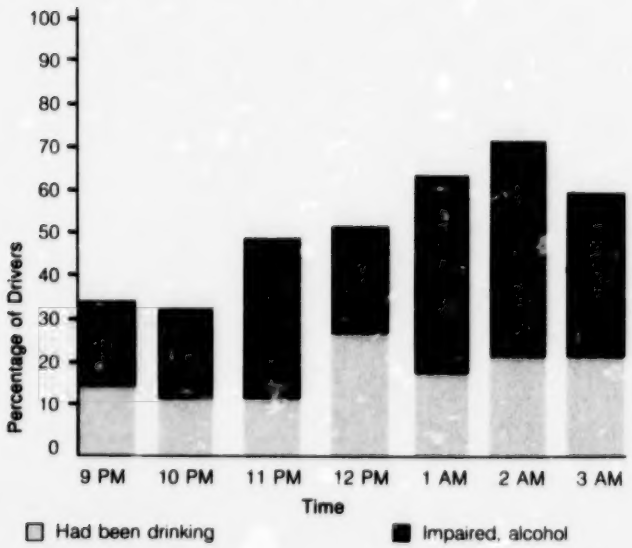
The four bar charts graphically present results obtained from the 1986 roadside B.A.C. survey and from an examination of 1986 fatal accidents. The similarities in their overall patterns are noteworthy.

Peak times for the occurrence of both drinking/driving and alcohol related crashes are late Friday night/early Saturday morning and late Saturday night/early Sunday morning. Other research studies carried out on the drinking/driving problem report that it is intensified in the summer months and primarily involves drivers who are in their mid-twenties and male although it is by no means restricted to only these types of drivers.

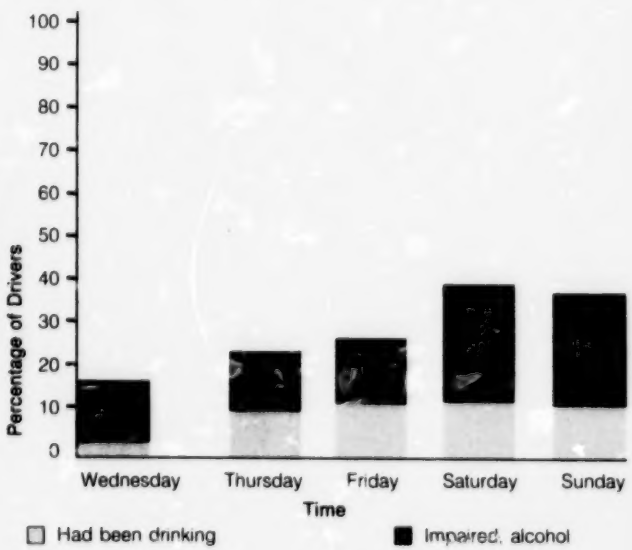
Understanding the various aspects of the drinking/driving problem aids greatly in the development of effective programs to counter it. By understanding the amount of drinking/driving taking place and the influence it has on accident involvement, the risk associated with drinking/driving can be evaluated. By understanding the characteristics of drinking drivers and their accidents, effective education, enforcement and deterrence campaigns can be mounted.

Drinking/driving is perhaps the most significant factor in fatal and serious injury accidents. Reducing its occurrence would go far in reducing the numbers of people killed and seriously injured in motor vehicle accidents.

Alcohol Involved Drivers by Time Of Day
Fatal Accidents — 1986



Alcohol Involved Drivers by Day Of Week
Fatal Accidents — 1986



Measuring the Extent of Impaired Driving
Contributed by The Drinking/Driving Countermeasures Office, Ministry of The Attorney General.

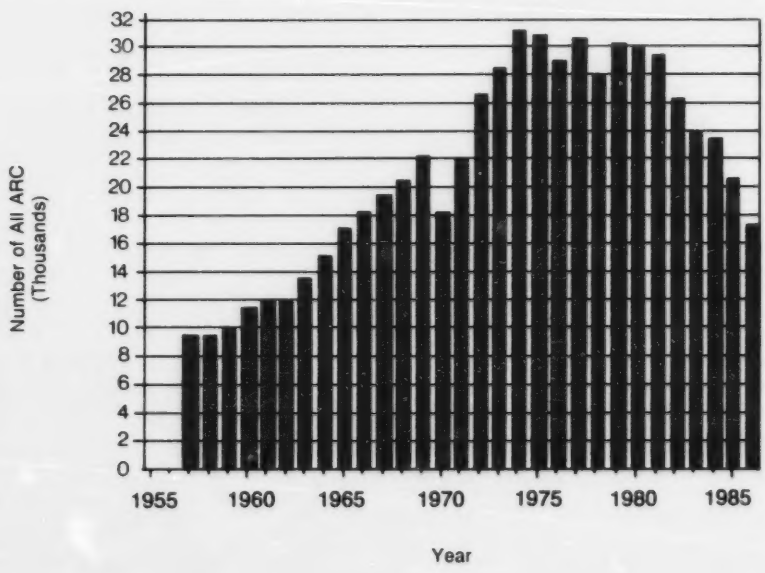
There are two broad classes of alcohol-related crash based on the driver's condition: the driver who **had been drinking** with a blood alcohol content under 80 mg% and the driver who was legally **impaired** with a blood alcohol content of 80 mg% or over. These groupings are determined for each personal injury and property damage crash by the investigating officer and for each driver killed in a crash by blood analysis under coroner's order.

Information on blood alcohol content is more carefully collected in fatal crashes than in personal injury and property damage crashes since the police are not always able to accurately judge a driver's condition without recourse to A.L.E.R.T. breath analysis machines or Borkenstein breathalyzers. These mechanical aids are often not available to investigating officers. Consequently, the condition of some drinking drivers involved in less severe crashes is reported as normal.

Even though more crashes occur than are reported, it is still necessary in forming opinions about impaired driving in Ontario, to use all the data provided by the Ontario Road Safety Annual Report since there are too few alcohol-involved driver fatalities to show trends. Other direct measures of impaired driving like police arrest data, and indirect measures such as unemployment figures or sales of alcohol and gasoline are useful in measuring the extent of the problem, but should not be given as much importance as the crash statistics. In order to claim that there has been a reduction in impaired driving, we take the view that there must be a reduction in both the number of all alcohol-related crashes and the rate of all alcohol-related crashes per 100,000 licensed drivers.

Impaired Driving in Ontario
How does the alcohol-related crash problem in Ontario look from this perspective? It appears that the problem is getting better recently after an increase to historic highs in the '70s. In particular, the rate per 100,000 drivers involved in all alcohol-related crashes rose from 459 in 1957 to a high of 787 in 1974 and fell to 302 in 1986. The absolute number of drivers involved in alcohol-related crashes was 9,577 in 1957, 31,277 in 1974 and 17,590 in 1986. The charts graphically show the rates and number of drivers involved in alcohol related crashes for the period 1957 to 1986.

Number of Alcohol-Related Crashes
Ontario, 1957 to 1986



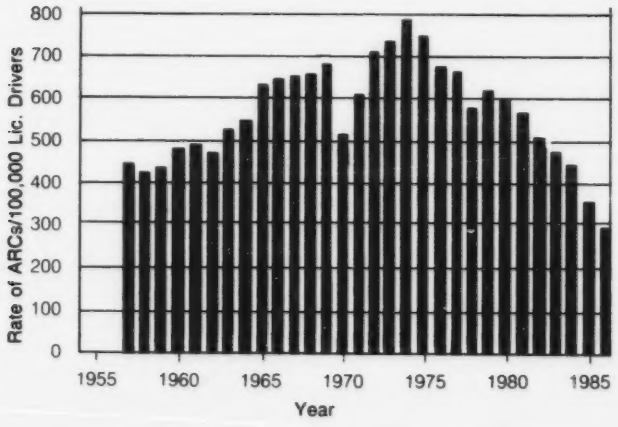
Young Drivers

Historically, drivers under age twenty-five have been in more motor vehicle crashes per driver than other age groups. This problem is also evident in alcohol-related crashes. Compared with 1957, drivers in this age group in 1986 have experienced an increase in their involvement in alcohol-related crashes relative to other age groups. However, the overrepresentation relative to the number holding licences for those under the age of twenty has been declining in recent years.

Regional Differences

In a province as geographically large and as sparsely settled as Ontario, there will be regional differences in the rates of alcohol-related crashes. Even if all Ontarians drank the same amount of alcohol and drove the same distance each year, it is still likely that variations in the crash rate would exist since people with a greater variety of means of transportation should have fewer alcohol-related crashes than those relying only on automobiles. Therefore, it is not surprising, that the rural areas of the province have more crashes with alcohol-involved drivers than the cities.

Rate of Alcohol-Related Crashes per 100,000 Drivers, Ontario, 1957-1986



Motor Vehicle Accidents — Health Perspective
Contributed by the Information Resources and Services Branch, Ministry of Health.

The majority of persons injured in motor vehicle accidents are taken to or arrive at hospital emergency departments. Most of these people have sustained minimal or minor injuries and are treated and released without a hospital admission. Persons with major and severe injuries are, however, admitted to a hospital for in-patient care. Since detailed statistics are captured for in-patients, this section describes the admissions of those individuals for in-patient care.

During the fiscal year April 1, 1985 to March 31, 1986, Ontario hospitals reported 12,987 acute (short-term) hospital admissions related to motor vehicle accidents. This number represents approximately 12 percent of all motor vehicle injuries in Ontario.

The 12,987 acute hospital admissions accounted for 137,309 hospital days of stay during the fiscal year 1985-86. The average length of stay per admission was 10.6 hospital days.

According to hospital records, 5,720 patients underwent some type of surgery in the course of their hospital treatment. 264 patients died in the hospitals following their admission for in-patient care.

Ontario residents accounted for 95 percent of hospitalized injuries, Quebec residents for 3 percent, and the rest of patients were residents of other Canadian provinces and the United States.

Selected Diagnoses of Motor Vehicle Accident Injuries Hospitalized in Ontario, 1985/86

Selected Diagnoses	Hospital Admissions	Hospital Days of Stay
Fracture of skull	774	8,032
Fracture of neck and trunk	1,712	26,912
Fracture of upper limb	925	7,160
Fracture of lower limb	2,053	35,832
Dislocation, sprains and strains	715	5,029
Intracranial injury, excluding those with skull fracture	2,798	23,732
Internal injury of chest, abdomen and pelvis	748	7,890
Open wound of head, neck and trunk	612	2,421
Open wound of upper limb	95	484
Open wound of lower limb	178	1,699
Other injuries, burns and traumatic complications	2,377	18,118
Total Admissions and Days	**12,987**	**137,309**

Selected Surgical Procedures for Motor Vehicle Accident Injuries Hospitalized in Ontario, 1985/86

Selected Procedures	Hospital Admissions	Hospital Days of Stay
Operations on skull, brain and cerebral meninges	233	9,187
Operations on spinal cord and canal structures	67	1,188
Operations on nose, mouth and pharynx	112	523
Operations on chest wall, pleura, mediastinum and diaphragm	134	1,843
Operations on bone marrow and spleen	151	2,817
Operations on kidney	175	1,502
Operations on facial bones and joints	254	2,279
Reduction of fracture and dislocation	2,348	37,303
Repair and plastic operations on joint structures	228	4,074
Operations on skin and subcutaneous tissue	1,017	6,479
Other surgical procedures	1,001	16,567
Sub-total of surgical admissions and days	**5,720**	**83,562**
No surgical procedures reported	**7,267**	**53,747**
Total admissions and days	**12,987**	**137,309**

2 the people

The number of people killed in traffic accidents in 1986 was 1,102. Since 1982, the number of fatalities has fluctuated in the range between 1,000 and 1,200.

In terms of injuries, there was a total of 108,839 injuries in 1986. While the total number of injuries is marginally lower than in 1985, the tendency toward an increase in the number of minimal injuries seen in recent years continues.

41.1 percent of those killed in accidents in 1986 were between the ages of 16 and 29. 44.6 percent of those injured were within this same age group. Alcohol involvement was reported in 46 percent of drivers killed in 1986. Alcohol involvement also figured in 27 percent of pedestrian fatalities.

2a. people in accidents

Table 2.1 **Category of Involved Person by Severity of Injury 1986**

Category of Involved Person	Severity of Injury					Total
	None	Minimal	Minor	Major	Fatal	
Driver	264,071	35,106	18,436	3,691	511	**321,815**
Passenger*	170,172	20,105	12,416	2,394	289	**205,376**
Pedestrian	288	1,994	2,710	1,077	153	**6,222**
Bicyclist	123	2,307	2,010	364	29	**4,833**
Moped Driver	5	9	12	5	—	**31**
Motorcycle Driver	770	1,858	2,152	1,002	99	**5,881**
Motorcycle Passenger	172	319	389	162	15	**1,057**
Other	9,417	99	120	102	6	**9,744**
Total	**445,018**	**61,797**	**38,245**	**8,797**	**1,102**	**554,959**

*Includes Bus Passengers

For all persons involved in motor vehicle accidents, 0.2% were fatally injured, 1.6% suffered major injuries, 6.9% had minor injuries, 11.1% had minimal injuries and 80.2% had no injuries (see Glossary for explanation of injury severity).

Figure 2.1 **Persons Killed 1977-1986**

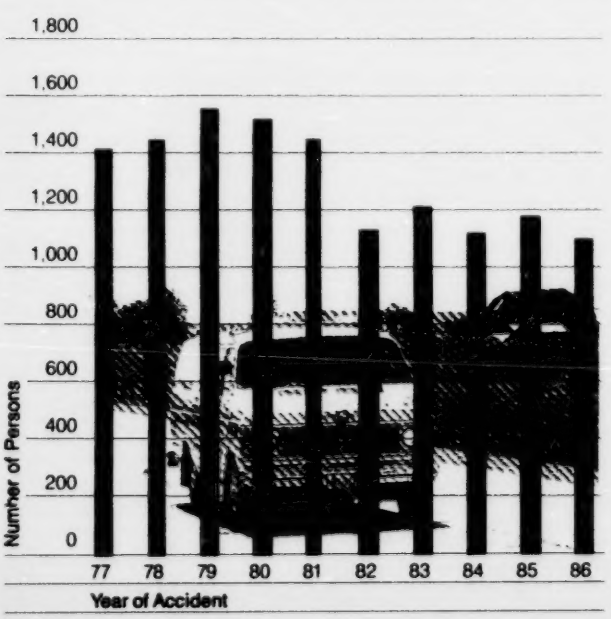


Table 2.2 **Category of Persons Killed by Age Groups 1986**

Category of Persons	Age Groups															Total
	0-4	5-15	16	17	18	19	20	21-24	25-34	35-44	45-54	55-64	65-74	75+	UK	
Driver	—	1	7	6	7	25	13	87	113	78	53	60	37	23	1	**511**
Passenger	12	41	16	11	9	11	9	26	30	25	20	27	31	21	—	**289**
Pedestrian	8	17	3	2	2	2	3	11	21	22	13	13	19	17	—	**153**
Bicyclist	1	10	2	—	—	2	3	3	2	2	—	1	2	—	1	**29**
Moped Driver	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**—**
Motorcycle Driver	—	3	1	4	10	11	8	25	24	12	1	—	—	—	—	**99**
Motorcycle Passenger	—	2	—	2	—	3	—	6	1	1	—	—	—	—	—	**15**
Other	—	1	—	—	—	1	1	1	1	—	—	1	—	—	—	**6**
Total	**21**	**75**	**29**	**25**	**28**	**55**	**37**	**159**	**192**	**140**	**87**	**102**	**89**	**61**	**2**	**1,102**

Figure 2.2 **Persons Injured and Severity of Injury 1977-1986**

Minimal and minor injuries continue to increase slightly while major injuries have decreased.

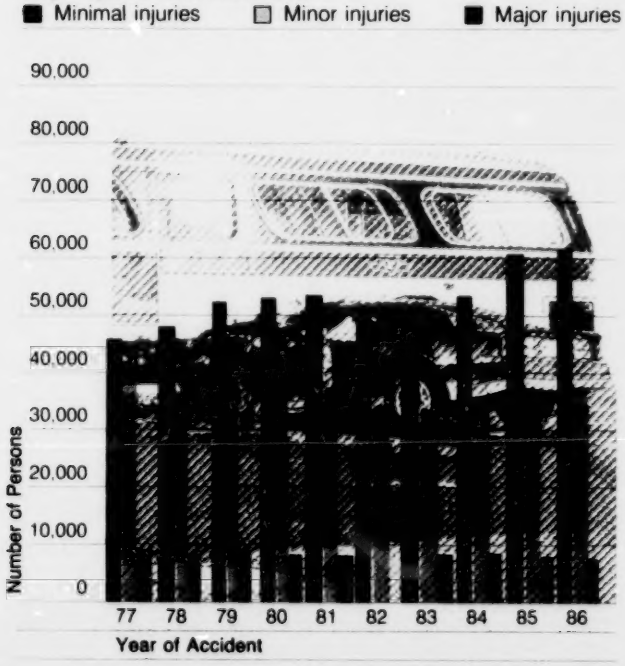


Figure 2.3 **Per Cent of Total Persons Killed by Age 1986**

Approximately 31% of persons killed were between ages 16 and 29.

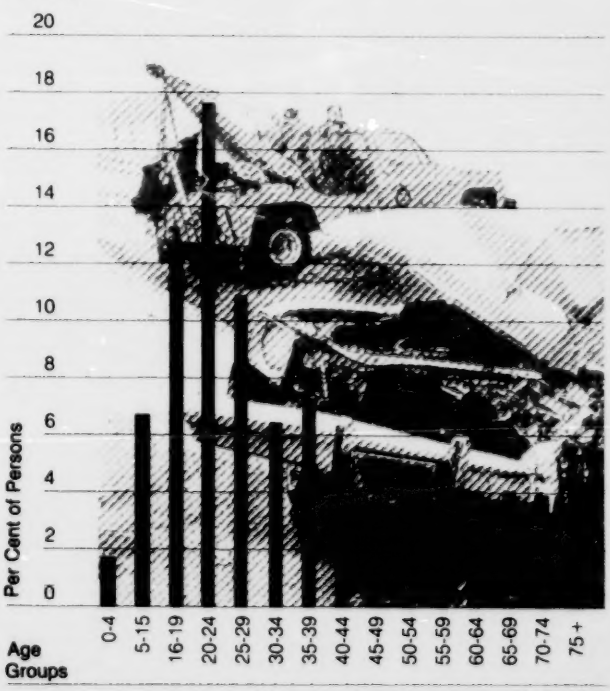
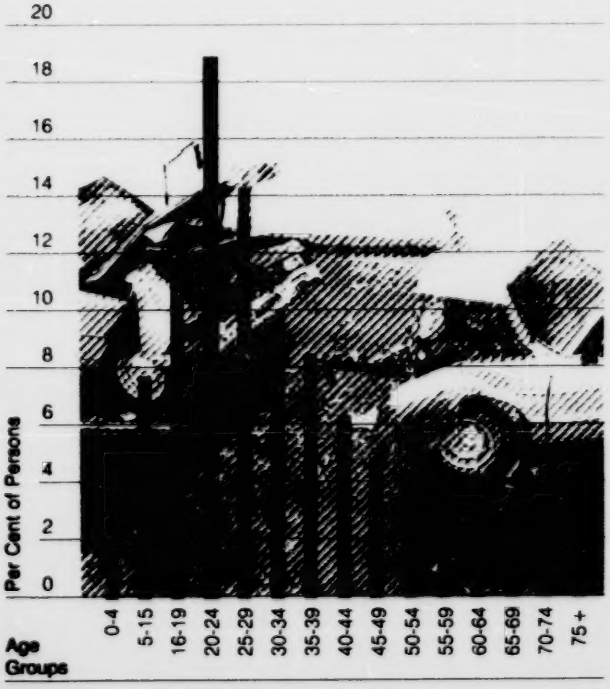


Table 2.3 **Category of Persons Injured by Age Groups 1986**

Category of Persons	Age Groups															Total
	0-4	5-15	16	17	18	19	20	21-24	25-34	35-44	45-54	55-64	65-74	75+	UK	
Driver	—	60	766	1,296	1,611	1,843	2,012	8,793	16,048	11,146	6,537	4,337	1,977	746	61	**57,233**
Passenger	1,577	4,963	1,132	1,264	1,348	1,349	1,369	4,574	6,190	3,625	2,685	2,303	1,481	731	324	**34,915**
Pedestrian	285	1,605	148	124	129	125	113	495	750	566	396	404	295	278	68	**5,781**
Bicyclist	28	1,641	262	231	192	200	194	543	581	183	82	60	24	14	446	**4,681**
Moped Driver	—	2	1	2	—	—	1	5	5	3	2	2	2	—	1	**26**
Motorcycle Driver	—	57	192	313	378	513	490	1,390	1,152	367	97	37	13	1	12	**5,012**
Motorcycle Passenger	2	79	58	86	85	76	89	216	118	40	10	4	—	—	7	**870**
Other	7	78	19	19	16	12	11	34	54	30	19	16	2	2	2	**321**
Total	**1,899**	**8,485**	**2,578**	**3,335**	**3,759**	**4,118**	**4,279**	**16,050**	**24,898**	**15,960**	**9,828**	**7,163**	**3,794**	**1,772**	**921**	**108,839**

Figure 2.4 **Per Cent of Total Persons Injured by Age 1986**



Note: Age groups in Tables 2.2 and 2.3 and Figures 2.3 and 2.4 are not directly comparable. Age groups in Figures 2.3 and 2.4 have been recombined into groups of equal size, each covering a 5 year period. The exception to this rule occurs in the teen's category where the break occurs at age 16 to accommodate for age of driver licensure.

Table 2.4 **Sex of Driver by Class of Accident 1986**

Sex of Driver	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Male	1,238	89,924	135,229	**226,391**
Female	262	36,848	50,866	**87,976**
Unknown	12	3,177	10,295	**13,484**
Total	**1,512**	**129,949**	**196,390**	**327,851**

While males represent 56% of the licensed driver population (See Table 2.18) they represent 69% of all drivers involved in all accidents. In fatal accidents 82% of the involved drivers were male.

Table 2.5 **Driver Condition by Class of Accident 1986**

Condition of Driver	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Normal	1,021	112,682	171,965	**285,668**
Had Been Drinking	140	5,457	4,881	**10,478**
Ability Impaired Alcohol	275	3,691	3,146	**7,112**
Ability Impaired Drugs	—	52	41	**93**
Fatigue	12	633	535	**1,180**
Medical or Physical Defect	5	385	271	**661**
Unknown	58	6,897	15,432	**22,387**
Other	1	152	119	**272**
Total	**1,512**	**129,949**	**196,390**	**327,851**

The percentage of drivers whose condition was reported to be normal decreases by accident severity from property damage accidents to fatal accidents. Specifically, a driver condition of normal was reported in 87.5% of property damage accidents, 86.9% of personal injury accidents and 67.5% of fatal accidents.

Figure 2.5 **Per Cent Driver Condition in Fatal Accidents 1977-1986**

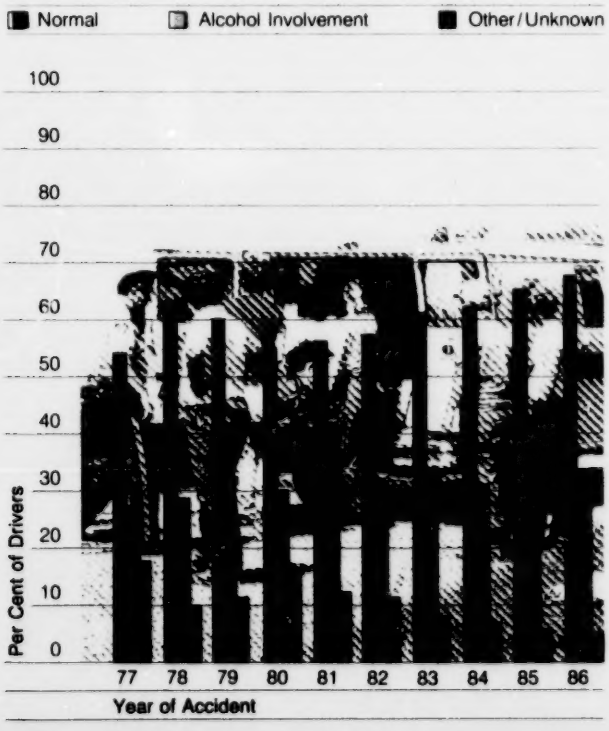


Table 2.6 **Driver Age by Driver Condition in All Accidents 1986**

Driver Age	Driver Condition					Total
	Normal	Ability Impaired Alcohol	Had Been Drinking	Other	Unknown	
Under 16	304	5	20	4	35	**368**
16	4,574	23	84	25	138	**4,844**
17	7,050	77	226	47	212	**7,612**
18	8,517	160	375	81	275	**9,408**
19	9,097	251	623	80	339	**10,390**
20	9,679	308	665	102	354	**11,108**
21-24	41,314	1,454	2,581	360	1,547	**47,256**
25-34	78,038	2,495	3,354	512	2,577	**86,976**
35-44	54,734	1,207	1,387	320	1,527	**59,175**
45-54	32,806	658	640	200	853	**35,157**
55-64	23,692	345	342	204	593	**25,176**
65-74	11,537	101	148	160	254	**12,200**
75 & over	4,214	19	25	108	121	**4,487**
Unknown	112	9	8	3	13,562	**13,694**
Total	**285,668**	**7,112**	**10,478**	**2,206**	**22,387**	**327,851**

Table 2.7 **Recorded Occurrence of Alcohol in Drivers Killed* 1986**

Recorded Occurrence	Drivers Number	Drivers %
Apparently Normal	335	54.0
Ability Impaired by Alcohol	220	35.4
Had Been Drinking	66	10.6
Total	**621**	**100.0**

*Excludes cases where alcohol usage was not provided and conditions other than normal.

Figure 2.6 **Per Cent Driver Condition in Personal Injury Accidents 1977-1986**

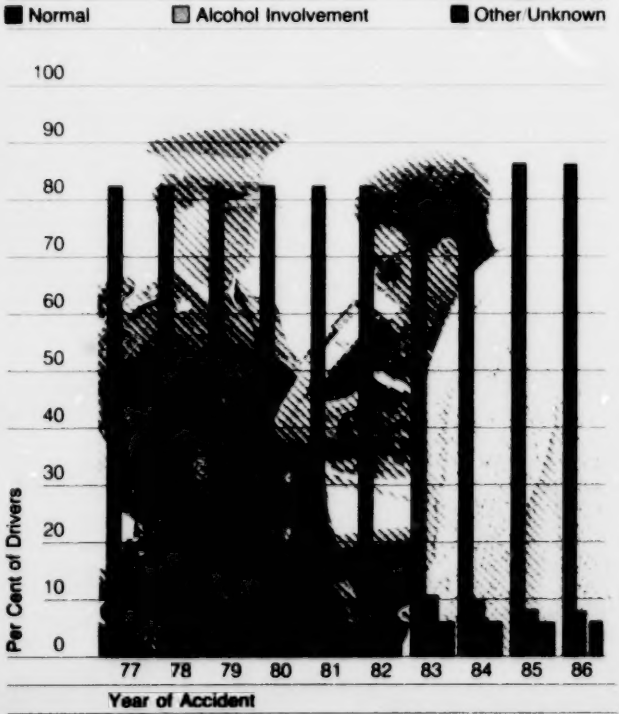


Figure 2.7 **Per Cent Recorded Alcohol Occurrence in Drivers Killed 1977-1986**

The proportion of alcohol involvement in drivers killed has fluctuated during the past decade. However, since 1981, there has been a decline each year, until, in the past three years, a larger percentage of drivers were reported to be "normal" than alcohol involved.

Table 2.8 **Apparent Driver Action by Class of Accident 1986**

Apparent Driver Action	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Driving Properly	623	59.558	84.880	**145,061**
Following Too Close	6	8.681	10.068	**18,755**
Speed Too Fast	247	11.611	14.476	**26,334**
Improper Turn	23	4.032	9.164	**13,219**
Disobey Traffic Signal	27	3.326	3.849	**7,202**
Disobey Stop Sign	46	1.895	2.060	**4,001**
Fail to Yield Right-Of-Way	122	12.526	23.207	**35,855**
Improper Passing	29	1.687	3.615	**5,331**
Lost Control	105	8.728	13.324	**22,157**
Wrong Way On One-Way Road	7	99	137	**243**
Disobey Other Controls	6	49	75	**130**
Unknown	161	7.973	17.855	**25,989**
Other*	110	9.784	13.680	**23,574**
Total	**1,512**	**129,949**	**196,390**	**327,851**

*Includes actions defined as Careless Driving, Inattentive Driving, Fell Asleep, Hit and Run, On Wrong Side of Road, Improper Parking, Impaired, Illegally Parked, Dangerous Driving, inexperience, etc. Of drivers involved in all accidents, 44.3% were driving properly. In fatal accidents, 41.2% of drivers were driving properly.

The most common driver errors in fatal accidents where a cause was known remain: Speed Too Fast (16.3%), and Fail To Yield (8.1%). For accidents in general for which a cause was known, the most common errors remain: Fail To Yield (10.9%), Speed Too Fast (8.0%), Lost Control (6.8%), and Following Too Close (5.7%).

Table 2.9 **Severity of Driver Injury by Seat Belt Usage 1986**

Severity of Injury	Seat Belt Usage: Installed In-Use		Installed Not In Use & Not Installed		Usage Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
None	227,853	82.6	13,567	65.4	22,651	90.4	**264,071**	**82.1**
Minimal	31,007	11.2	3,106	14.9	993	4.0	**35,106**	**10.9**
Minor	14,790	5.4	2,780	13.4	866	3.4	**18,436**	**5.7**
Major	2,193	0.8	1,058	5.1	440	1.8	**3,691**	**1.1**
Fatal	163	0.06	254	1.22	94	0.4	**511**	**0.2**
Total	**276,006**	**100.0**	**20,765**	**100.0**	**25,044**	**100.0**	**321,815**	**100.0**

Table 2.10 **Severity of Passenger Injury by Seat Belt Usage 1986**

Severity of Injury	Seat Belt Usage: Installed In-Use		Installed Not In Use & Not Installed		Usage Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
None	107,123	80.6	11,127	58.0	11,653	89.0	**129,903**	**78.7**
Minimal	15,951	12.0	3,571	18.6	583	4.4	**20,105**	**12.2**
Minor	8,473	6.4	3,378	17.6	565	4.3	**12,416**	**7.5**
Major	1,182	0.9	954	5.0	258	2.0	**2,394**	**1.4**
Fatal	92	0.07	160	0.83	37	0.3	**289**	**0.2**
Total	**132,821**	**100.0**	**19,190**	**100.0**	**13,096**	**100.0**	**165,107**	**100.0**

Seat belts are not used by approximately one-third of Ontario drivers and passengers. These tables indicate that in accidents, deaths and serious injuries are proportionately much higher for the non-wearing groups; emphasizing the protective value of seat belts particularly in certain types of accidents.

Table 2.11 **Restraint Use for Children (0-4 Years) Killed 1982-1986**

Year	Restraint		No Restraint		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
1982	1	8.3	10	83.3	1	8.3	**12**	**100**
1983	2	20.0	5	50.0	3	30.0	**10**	**100**
1984	3	27.3	8	72.7	—	0.0	**11**	**100**
1985	4	33.3	7	58.3	1	8.3	**12**	**100**
1986	7	58.3	5	41.7	—	0.0	**12**	**100**

Table 2.12 **Restraint Use for Children (0-4 Years) Injured by Severity of Injury 1982-1986**

Year	% of Unrestrained		% of Restrained	
	Minimal/ Minor	Major/ Fatal	Minimal/ Minor	Major/ Fatal
1982	89.5	10.5	93.4	6.6
1983	88.6	11.4	92.7	7.3
1984	90.7	9.2	96.4	3.6
1985	87.9	12.1	94.9	5.1
1986	89.3	10.7	94.8	5.2

Examination of fatalities, shows that those children who were restrained were in vehicles where other occupants were also killed. However, in the majority of cases, where children were unrestrained, they were the only one killed in that vehicle. Although most children travel restrained, the smaller group of unrestrained children suffer a proportionately higher incidence of severe and fatal injuries.

An additional estimated 20% of injuries are unreported in the figures as they occur not in accident situations but as a result of sudden stops or swerves. An unrestrained child can fall off the seat, impacting the vehicle interior or can be ejected.

Table 2.13 **Pedestrian Condition by Severity of Injury 1986**

Condition of Pedestrian	Killed	Injured
Normal	107	4,570
Had Been Drinking	12	393
Ability Impaired Alcohol	30	135
Ability Impaired Drugs	—	7
Fatigue	—	1
Medical or Physical Defect	4	95
Unknown	—	516
Other	—	64
Total	**153**	**5,781**

While 27% of pedestrians killed had been drinking or were impaired by alcohol, only 9% of pedestrians injured were alcohol involved.

Table 2.14 **Apparent Pedestrian Action by Severity of Injury 1986**

Apparent Pedestrian Action	Killed	Injured
Crossing Intersection With Right-of-Way	8	1,126
Crossing Intersection Without Right-of-Way	13	428
Crossing Intersection No Traffic Control	3	147
Crossing Pedestrian Crossover	2	212
Walking on Roadway With Traffic	16	158
Walking on Roadway Against Traffic	4	105
On Sidewalk or Shoulder	10	422
Coming from Behind Parked Vehicle or Object	6	385
Playing or Working on Highway	4	98
Running into Roadway	20	1,033
Crossing Through Traffic	44	844
Other	23	823
Total	**153**	**5,781**

Pedestrian interaction with traffic remains relatively stable over the years. The major causes of death and injury are through crossing the intersection with right-of-way (19%) running into the roadway (18%) and crossing through traffic (15%); the latter causing a higher proportion of fatalities, due presumably to higher traffic speeds than encountered at intersections.

2b. putting the people in context

Table 2.15 **Category of Persons Killed and Injured 1977-1986**

Year	Ontario Population (Est.)	Category of Persons								Persons Killed In All Classes Rate/100,000		Persons Injured In All Classes Rate/100,000	
		Driver		Passenger*		Pedestrian		All Others					
		Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Number	Population	Number	Population
1977	8,373,000	609	45,620	393	34,854	252	6,998	166	8,192	1,420	17.0	95,664	1,142.5
1978	8,444,000	623	46,953	383	34,578	284	6,314	160	7,494	1,450	17.2	94,979	1,124.8
1979	8,546,000	668	50,618	468	36,332	273	6,436	151	7,935	1,560	18.3	101,321	1,185.6
1980	8,570,000	682	50,653	413	35,982	266	6,548	147	8,184	1,508	17.6	101,367	1,182.8
1981	8,625,000	657	50,574	393	34,450	237	6,344	158	8,953	1,445	16.8	100,321	1,163.1
1982	8,715,000	487	45,409	296	31,588	179	5,981	176	9,837	1,138	13.1	92,815	1,065.0
1983	8,816,000	528	45,440	302	30,283	204	5,618	170	10,365	1,204	13.7	91,706	1,040.2
1984	9,024,000	460	48,674	282	31,865	189	5,767	201	10,924	1,132	12.5	97,230	1,077.5
1985	9,066,000	502	55,859	333	35,717	182	6,099	174	11,494	1,191	13.1	109,169	1,204.2
1986	9,181,900	511	57,233	289	34,915	153	5,781	149	10,910	1,102	12.0	108,839	1,185.4

*Excludes motorcycle passengers. (Motorcycle passengers included with "all others".) The trend toward a decrease in the rate of fatalities per 100,000 population continues. Although the number of drivers killed shows a slight increase the total number of fatalities is the lowest since 1954.

Table 2.16 **Sex of Driver Population by Age Groups 1986**

Sex of Driver	Age Groups							Total
	16-19	20-24	25-34	35-44	45-54	55-64	65+	
Male	169,269	374,689	793,030	674,238	476,664	410,698	341,445	**3,240,033**
Female	125,838	301,594	701,628	583,486	363,658	286,556	215,006	**2,577,766**
Total	**295,107**	**676,283**	**1,494,658**	**1,257,724**	**840,322**	**697,254**	**556,451**	**5,817,799**

Table 2.17 Driver Population Age Groups 1977-1986

Year	Age Groups							Total
	16-19	20-24	25-34	35-44	45-54	55-64	65+	
1977	327,021	604,822	1,188,170	846,727	739,247	517,903	339,013	**4,562,903**
1978	333,929	625,774	1,231,844	882,939	749,350	541,028	360,682	**4,725,546**
1979	352,617	636,554	1,264,128	912,519	755,093	559,011	378,429	**4,858,351**
1980	345,077	647,805	1,300,738	943,540	764,308	508,173	407,830	**4,993,471**
1981	354,492	659,144	1,313,592	990,806	771,931	604,892	428,320	**5,123,177**
1982	342,136	670,118	1,328,974	1,051,422	779,235	628,131	447,182	**5,247,198**
1983	320,478	682,033	1,359,350	1,103,403	792,933	650,687	471,375	**5,380,259**
1984	300,364	689,476	1,396,560	1,155,421	806,207	671,271	494,612	**5,513,911**
1985	293,908	687,467	1,443,327	1,205,614	820,397	685,640	524,069	**5,660,422**
1986	295,107	676,283	1,494,658	1,257,724	840,322	697,254	556,451	**5,817,799**

The licensed driver population continues to change. The greatest growth occurred in the 35-44 age category while there was a decline in the number of drivers in the 20-24 age group.

Table 2.18 Driver Licence Class by Sex 1986

Licence Class	Driver Sex				Total	%
	Male	%	Female	%		
A	79,345	2.44	587	02	**79,932**	**1.37**
AM	23,537	72	98	00	**23,635**	**.40**
AB	3,215	09	166	00	**3,381**	**.05**
AC	9,730	30	99	00	**9,829**	**.16**
ABM	1,338	04	56	00	**1,394**	**.02**
ACM	3,905	12	28	00	**3,933**	**.06**
B	15,280	47	11,865	46	**27,145**	**.46**
BM	3,516	10	562	02	**4,078**	**.07**
C	9,186	28	360	01	**9,546**	**.16**
CM	2,208	06	34	00	**2,242**	**.03**
D	165,898	5.12	4,508	17	**170,406**	**2.92**
DM	33,022	1.01	271	01	**33,293**	**.57**
DE	75	00	14	00	**89**	**.00**
DF	2,398	07	68	00	**2,466**	**.04**
DEM	15	00	0	00	**15**	**.00**
DFM	889	02	6	00	**895**	**.01**
E	1,181	03	2,050	07	**3,231**	**.05**
EM	140	00	30	00	**170**	**.00**
F	9,298	28	4,869	18	**14,167**	**.24**
FM	2,208	06	260	01	**2,468**	**.04**
G	2,573,780	79.43	2,513,046	97.48	**5,086,826**	**87.43**
GM	294,349	9.08	37,904	1.47	**332,253**	**5.71**
M	5,520	.17	885	03	**6,405**	**.11**
Other/Unknown	0	00	0	00	**0**	**.00**
Total	**3,240,033**	**100.00**	**2,577,766**	**100.00**	**5,817,799**	**100.00**

Table 2.19 **Licensed Drivers, Total Accidents, Persons Killed and Persons Injured 1931-1986**

Year	Licensed Drivers	Total Accidents	Persons Killed	Persons Injured
1931	666,266	9,241	571	8,494
1932	648,710	9,171	502	8,231
1933	638,280	8,634	403	7,877
1934	665,743	9,645	512	8,990
1935	707,457	10,648	560	9,839
1936	755,765	11,388	546	10,251
1937	802,765	13,906	766	12,092
1938	866,729	13,715	640	11,683
1939	899,572	13,710	652	11,638
1940	937,551	16,921	716	13,715
1941	986,773	18,167	801	14,275
1942	961,883	13,490	567	10,205
1943	919,457	11,025	549	8,628
1944	905,650	11,004	498	8,373
1945	971,852	13,458	598	9,804
1946	1,087,445	17,356	688	12,228
1947	1,144,291	22,293	734	13,056
1948	1,209,408	27,406	740	14,970
1949	1,278,584	34,472	830	17,469
1950	1,366,388	43,681	791	19,940
1951	1,461,538	54,920	949	22,557
1952	1,556,559	58,515	1,010	23,643
1953	1,656,259	65,866	1,082	24,353
1954	1,747,567	62,509	1,045	24,607
1955	1,856,845	63,219	1,111	26,246
1956	1,967,789	71,399	1,180	28,626
1957	2,088,551	76,302	1,279	30,414
1958	2,176,417	76,884	1,112	30,106
1959	2,270,246	81,518	1,187	31,602
1960	2,355,567	87,186	1,166	34,436
1961	2,414,615	85,577	1,268	37,146
1962	2,469,425	94,231	1,383	41,766
1963	2,555,015	104,919	1,421	47,801
1964	2,694,023	111,232	1,424	54,560
1965	2,739,138	128,462	1,611	60,917
1966	2,821,648	139,781	1,596	65,210
1967	3,004,654	145,008	1,719	67,280
1968	3,128,509	155,127	1,586	71,520
1969	3,247,979	169,395	1,683	74,902
1970	3,422,892	141,609	1,535	75,126

Table 2.19 **Licensed Drivers, Total Accidents, Persons Killed and Persons Injured 1931-1986 (continued)**

Year	Licensed Drivers	Total Accidents	Persons Killed	Persons Injured
1971	3,563,197	158,831	1,769	84,650
1972	3,688,541	189,494	1,934	95,181
1973	3,841,628	193,021	1,959	97,790
1974	3,972,980	204,271	1,748	98,673
1975	4,160,623	213,689	1,800	97,034
1976	4,315,925	211,865	1,511	83,736
1977	4,562,903	218,567	1,420	95,664
1978	4,725,546	186,363	1,450	94,979
1979	4,858,351	197,196	1,560	101,321
1980	4,993,531	196,501	1,508	101,367
1981	5,123,177	198,372	1,445	100,321
1982	5,247,198	187,943	1,138	92,815
1983	5,380,259	181,999	1,204	91,706
1984	5,513,911	194,782	1,132	97,230
1985	5,660,422	189,750	1,191	109,169
1986	5,817,799	187,286	1,102	108,839

Traffic accident fatalities have decreased significantly from a peak of 1,959 in 1973 to the 1986 volume of 1,102, the lowest number of fatalities since 1954. The total number of persons injured in 1985 and 1986 shows an increase over other years and reflects the increasing volumes of reported minimal injuries.

Table 2.20 **Original Licences Issued 1982-1986**

Year	Original Licences
1982	222,143
1983	209,682
1984	209,675
1985	224,513
1986	231,697

Table 2.21 **Temporary Licence Permits Issued for Class L's and Class R's 1982-1986**

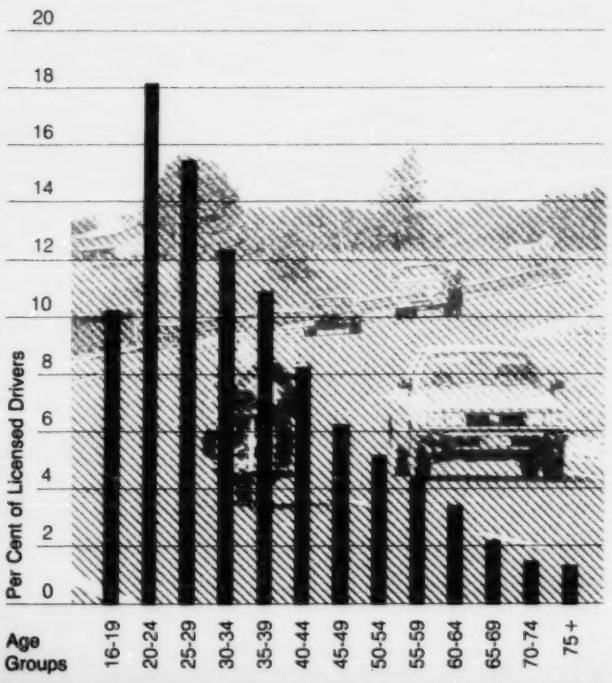
Year	Licence Permits	
	L	R
1982	358,615	45,657
1983	336,808	44,404
1984	342,045	45,672
1985	352,908	43,967
1986	369,626	42,032

Table 2.22 **Driver Age Groups — Number Licensed, Accident Involvement and Per Cent Involved in Accidents 1986**

Drivers' Age	Drivers Licensed			Drivers Involved in Accidents			% of Drivers of Each Age Involved in Accidents		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Under 16	—	—	—	281	87	**368**	—	—	—
16	19,139	12,598	**31,737**	3,414	1,430	**4,844**	17.8	11.4	**15.3**
17	42,941	31,566	**74,507**	5,354	2,258	**7,612**	12.5	7.2	**10.2**
18	50,726	38,543	**89,269**	6,847	2,561	**9,408**	13.5	6.6	**10.5**
19	56,463	43,131	**99,594**	7,742	2,648	**10,390**	13.7	6.1	**10.4**
20	62,621	48,503	**111,124**	8,185	2,923	**11,108**	13.1	6.0	**10.0**
21-24	312,068	253,091	**565,159**	34,917	12,339	**47,256**	11.2	4.9	**8.4**
25-34	793,030	701,628	**1,494,658**	62,115	24,861	**86,976**	7.8	3.6	**5.8**
35-44	674,238	583,486	**1,257,724**	40,391	18,784	**59,175**	6.0	3.2	**4.7**
45-54	476,664	363,658	**840,322**	25,763	9,394	**35,157**	5.4	2.6	**4.2**
55-64	410,698	286,556	**697,254**	18,951	6,225	**25,176**	4.6	2.2	**3.6**
65-74	250,345	168,306	**418,651**	8,832	3,368	**12,200**	3.5	2.0	**2.9**
75 & Over	91,100	46,700	**137,800**	3,438	1,049	**4,487**	3.8	2.2	**3.3**
Unknown	—	—	—	—	—	**13,694**	—	—	—
Total	**3,240,033**	**2,577,766**	**5,817,799**	**226,391**	**87,976**	**327,851**	**7.0**	**3.4**	**5.6**

Accident involvement for both males and females is highest at age 16. In each age grouping males outnumber females in accident involvement.

Figure 2.8 **Per Cent of Licensed Drivers Involved in Accidents by Age 1986**



3 the accident

The general downward trend in the total number of accidents continues. Over the last 10 years total reportable motor vehicle accidents dropped by 14%. Fatal and Property Damage accidents with slight fluctuations, have decreased over the time period. However, Personal Injury accidents have increased by 11.5% since 1984. On closer examination of the breakdown of injury severity, the increase is attributable to a greater number of minimal injury reports.

Fatal accidents have certain characteristics which deviate from the patterns of all accidents. Whereas single vehicle accidents account for 27% of all accidents, almost one half of fatal accidents involved only a single vehicle.

Although generally motor vehicle accidents occur in the winter months (37%), fatal crashes occur primarily in the summer months (34%).

Fatal accidents again contrast with total accidents in terms of time of day. The largest proportion of all accidents occur in the afternoon, but fatal accidents most often occur at night.

Similarly, only 28% of all accidents occurred in darkness but 46% of fatal accidents occurred in this light condition.

3a. types of accidents

Table 3.1 **Class of Accident 1977-1986**

Year	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
1977	1,213	63,787	153,567	**218,567**
1978	1,263	62,664	122,436	**186,363**
1979	1,316	67,201	128,679	**197,196**
1980	1,296	67,391	127,814	**196,501**
1981	1,234	67,292	129,846	**198,372**
1982	997	62,956	123,990	**187,943**
1983	1,042	62,735	118,222	**181,999**
1984	1,011	66,101	127,670	**194,782**
1985	1,036	73,840	114,874	**189,750**
1986	951	73,703	112,632	**187,286**

Since 1977, total reportable motor vehicle accidents have declined by 14% and property damage accidents by 27%. The latter drop may be partially attributable to changes in reporting criterion (See Glossary). The number of personal injury accidents has remained at a level comparable to 1985. As noted in last year's annual report, this level is sustained primarily by reports of minimal injury.

Table 3.2 **Accident Rate Per One Million Kilometres Travelled 1977-1986**

Year	Accident Rate
1977	3.3
1978	2.7
1979	2.7
1980	2.7
1981	2.8
1982	2.9
1983	2.8
1984	2.9
1985	2.8
1986	2.7

Table 3.3 Accident Involving Motor Vehicle by Class of Accident 1986

Accident Involving Motor Vehicle and Moveable Objects:	Class of Accident Fatal	Personal Injury	Property Damage	Total
Other Motor Vehicle/s	437	46,345	84,845	**131,627**
Pedestrian	142	5,201	2	**5,345**
Cyclist	31	4,555	43	**4,629**
Railway Train	14	73	101	**188**
Street Car	—	86	219	**305**
Farm Tractor	2	64	137	**203**
Animal	4	355	3,072	**3,431**
Other Moveable Object	1	138	174	**313**
Sub-total	**631**	**56,817**	**88,593**	**146,041**
Fixed Objects				
Restraining Barrier	21	1,550	4,257	**5,828**
Rigid Pole	22	1,733	2,739	**4,494**
Breakaway Pole	5	450	955	**1,410**
Tree	41	1,136	1,366	**2,543**
Post	22	622	1,535	**2,179**
Fence	3	379	881	**1,263**
Culvert	13	405	253	**671**
Bridge Support	10	186	277	**473**
Rock Face	13	349	402	**764**
Snow Bank or Drift	2	367	748	**1,117**
Ditch	93	4,294	4,164	**8,551**
Curb	14	1,048	1,337	**2,399**
Crash Cushion	—	34	60	**94**
Building or Wall	3	178	319	**500**
Other Fixed Object	23	1,137	1,853	**3,013**
Sub-total	**285**	**13,868**	**21,146**	**35,299**
Other Circumstances:				
Fire/Explosion	2	31	603	**636**
Submersion	—	7	7	**14**
Rollover	29	1,577	891	**2,497**
Other Non-Collision Event	4	1,403	1,392	**2,799**
Sub-total	**35**	**3,018**	**2,893**	**5,946**
Total	**951**	**73,703**	**112,632**	**187,286**

Collisions with moveable objects, particularly other motor vehicles, account for the majority of all accidents (78%). Accidents involving fixed objects are the next most frequent and account for 19% of all accidents. Fatal accidents with 66% involving moveable objects and 30% involving fixed objects, are somewhat different

Table 3.4 Initial Impact Type by Class of Accident 1986

Initial Impact Type	Class of Accident Fatal	Personal Injury	Property Damage	Total
Rear End	53	20,532	22,249	**42,834**
Angle	147	14,788	26,106	**41,041**
Turning Movement	47	8,569	15,158	**23,774**
Side-Swipe	22	3,522	14,459	**18,003**
Approaching	209	3,627	5,356	**9,192**
Single Motor Vehicle	472	22,326	26,770	**49,568**
Other	1	339	2,534	**2,874**
Total	**951**	**73,703**	**112,632**	**187,286**

Overall, accidents are quite evenly split between the three impact types "rear end", "angle" and "single motor vehicle" (23%, 22% and 27% respectively). However, almost half the fatal accidents (49.6%) involved single motor vehicles.

3b. time and environment

Table 3.5 **Month of Occurrence by Class of Accident 1986**

Month of Occurrence	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
January	58	6.1	5,427	7.4	10,978	9.7	**16,463**	**8.8**
February	40	4.2	4,570	6.2	9,405	8.4	**14,015**	**7.5**
March	49	5.1	4,731	6.4	8,594	7.6	**13,374**	**7.1**
April	68	7.2	4,884	6.6	6,900	6.1	**11,852**	**6.3**
May	90	9.5	6,340	8.6	7,939	7.0	**14,369**	**7.7**
June	108	11.4	7,072	9.6	8,526	7.6	**15,706**	**8.4**
July	92	9.7	7,095	9.6	8,438	7.5	**15,625**	**8.3**
August	120	12.6	7,441	10.1	8,716	7.7	**16,277**	**8.7**
September	75	7.9	6,968	9.5	9,336	8.3	**16,379**	**8.7**
October	90	9.5	6,847	9.3	10,334	9.2	**17,271**	**9.2**
November	86	9.0	6,820	9.2	12,444	11.0	**19,350**	**10.3**
December	75	7.9	5,508	7.5	11,022	9.8	**16,605**	**8.9**
Total	**951**	**100.0**	**73,703**	**100.0**	**112,632**	**100.0**	**187,286**	**100.0**

Although motor vehicle accidents occur most frequently during October, November, December and January (37%), fatal accidents occur most frequently during the summer months of June, July and August (34%).

Figure 3.1 **Accidents by Season of Occurrence and Class of Accident 1986**

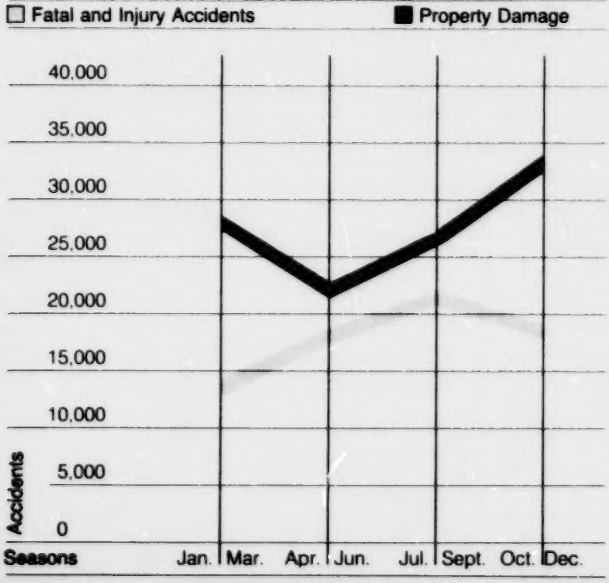


Table 3.6 Day of Week by Class of Accident 1986

Day of Occurrence	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
Sunday	171	18.0	8,299	11.3	11,472	10.2	**19,942**	**10.6**
Monday	97	10.2	9,648	13.1	14,788	13.1	**24,533**	**13.1**
Tuesday	103	10.8	10,046	13.6	15,911	14.1	**26,060**	**13.9**
Wednesday	103	10.8	9,769	13.3	15,178	13.5	**25,050**	**13.4**
Thursday	124	13.0	11,200	15.2	18,107	16.1	**29,431**	**15.7**
Friday	173	18.2	13,110	17.8	20,380	18.1	**33,663**	**18.0**
Saturday	180	19.0	11,631	15.8	16,796	14.9	**28,607**	**15.3**
Total	**951**	**100.0**	**73,703**	**100.0**	**112,632**	**100.0**	**187,286**	**100.0**

Any accident is most likely to occur on a Friday but fatal accidents occur with almost equal frequency on Friday, Saturday and Sunday.

Table 3.7 Hour of Occurrence by Class of Accident 1986

Hour of Occurrence A.M.	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
12 to 1 a.m.	36	3.8	1,674	2.3	2,185	1.9	**3,895**	**2.1**
1 to 2 a.m.	74	7.8	2,103	2.9	2,776	2.5	**4,953**	**2.6**
2 to 3 a.m.	47	4.9	1,281	1.7	1,835	1.6	**3,163**	**1.7**
3 to 4 a.m.	20	2.1	736	1.0	1,070	0.9	**1,826**	**1.0**
4 to 5 a.m.	12	1.3	497	0.7	708	0.6	**1,217**	**0.6**
5 to 6 a.m.	11	1.2	511	0.7	846	0.8	**1,368**	**0.7**
Sub-total	**200**	**21.0**	**6,802**	**9.2**	**9,420**	**8.4**	**16,422**	**8.8**
6 to 7 a.m.	28	2.9	1,405	1.9	2,320	2.1	**3,753**	**2.0**
7 to 8 a.m.	21	2.2	2,820	3.8	4,753	4.2	**7,594**	**4.1**
8 to 9 a.m.	33	3.5	3973	5.4	6,697	5.9	**10,703**	**5.7**
9 to 10 a.m.	31	3.3	2,538	3.4	4,693	4.2	**7,262**	**3.9**
10 to 11 a.m.	20	2.1	2,837	3.8	5,109	4.5	**7,966**	**4.2**
11 to 12 a.m.	42	4.4	3,561	4.8	6,004	5.3	**9,607**	**5.1**
Sub-total	**175**	**18.4**	**17,134**	**23.2**	**29,576**	**26.2**	**46,885**	**25.0**
Hour of Occurrence P.M.								
12 to 1 p.m.	32	3.4	4,270	5.8	6,586	5.8	**10,888**	**5.8**
1 to 2 p.m.	43	4.5	4,021	5.5	6,474	5.7	**10,538**	**5.6**
2 to 3 p.m.	39	4.1	4,423	6.0	6,861	6.1	**11,323**	**6.0**
3 to 4 p.m.	43	4.5	5,694	7.7	8,443	7.5	**14,180**	**7.6**
4 to 5 p.m.	56	5.9	6,680	9.1	9,420	8.4	**16,156**	**8.6**
5 to 6 p.m.	57	6.0	6,094	8.3	8,396	7.5	**14,547**	**7.8**
Sub-total	**270**	**28.4**	**31,182**	**42.3**	**46,180**	**41.0**	**77,632**	**41.5**
6 to 7 p.m.	58	6.1	4,478	6.1	6,208	5.5	**10,744**	**5.7**
7 to 8 p.m.	57	6.0	3,895	5.3	5,311	4.7	**9,263**	**4.9**
8 to 9 p.m.	46	4.8	3,011	4.1	4,196	3.7	**7,253**	**3.9**
9 to 10 p.m.	54	5.7	2,625	3.6	3,741	3.3	**6,420**	**3.4**
10 to 11 p.m.	39	4.1	2,243	3.0	3,310	2.9	**5,592**	**3.0**
11 to 12 p.m.	44	4.6	2,093	2.8	3,098	2.8	**5,235**	**2.8**
Sub-total	**298**	**31.3**	**18,345**	**24.9**	**25,864**	**22.9**	**44,507**	**23.7**
Unknown	8	0.8	240	0.3	1,592	1.4	**1,840**	**1.0**
Total	**951**	**100.0**	**73,703**	**100.0**	**112,632**	**100.0**	**187,286**	**100.0**

The largest proportion of all accidents occur between twelve noon and six p.m. In contrast, fatal accidents occur most frequently from six p.m. to twelve midnight.

Table 3.8 **Statutory Holidays, Holiday Weekends — Fatal Accidents, Persons Killed and Persons Injured 1986**

Statutory Holiday	Number of Fatal Accidents	Drivers		Passengers		Others		Total	
		Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
Easter Weekend	11	6	6	6	10	1	—	**13**	**16**
Victoria Day	10	4	7	6	5	2	—	**12**	**12**
Canada Day	4	2	1	1	1	1	—	**4**	**2**
Civic Holiday (Simcoe Day)	7	6	2	2	2	2	—	**10**	**4**
Labour Day	13	7	1	3	4	5	—	**15**	**5**
Thanksgiving Day	11	5	5	3	9	4	1	**12**	**15**
Christmas/Boxing Day	3	3	1	—	1	—	—	**3**	**2**

On average 3 day weekend periods, (Friday six p.m. to Monday midnight) for the summer, winter seasons and the whole year, 17.1, 10.7 and 13.9 people were killed, respectively.

Figure 3.2 **Light Condition for All Accidents 1986**

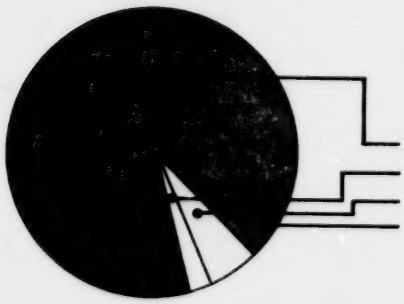


Table 3.9 **Light Condition by Class of Accident 1986**

Light Condition	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
Daylight	463	48.7	49,392	67.0	74,459	66.1	**124,314**	**66.4**
Dawn	19	2.0	1,124	1.5	1,827	1.6	**2,970**	**1.6**
Dusk	27	2.8	2,932	4.0	4,598	4.1	**7,557**	**4.0**
Darkness	442	46.5	20,255	27.5	31,748	28.2	**52,445**	**28.0**
Total	**951**	**100.0**	**73,703**	**100.0**	**112,632**	**100.0**	**187,286**	**100.0**

Although only 28% of all accidents occurred in darkness, 46% of fatal accidents occurred in this condition.

Figure 3.3 **Visibility for All Accidents 1986**

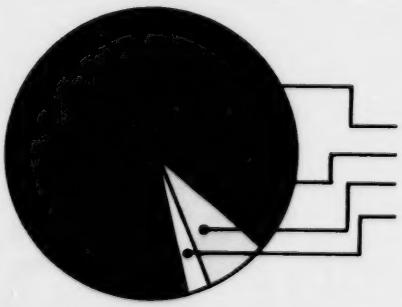


Table 3.10 **Visibility by Class of Accident 1986**

Visibility	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
Clear	757	79.6	57,297	77.8	84,593	75.1	**142,647**	**76.2**
Rain	97	10.2	10,263	13.9	15,253	13.6	**25,613**	**13.7**
Snow or Sleet	63	6.6	4,444	6.0	10,377	9.2	**14,884**	**7.9**
Fog, Mist, Smoke or Dust	34	3.6	1,699	2.3	2,409	2.1	**4,142**	**2.2**
Total	**951**	**100.0**	**73,703**	**100.0**	**112,632**	**100.0**	**187,286**	**100.0**

3c. the accident location

Table 3.11 **Road Jurisdiction by Class of Accident 1986**

Road Jurisdiction	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Municipal (Excl. Twp. Rd.)	356	47,289	73,154	**120,799**
Provincial Highway	380	14,947	22,675	**38,002**
Township	88	3,867	6,137	**10,092**
County or District	98	2,900	4,029	**7,027**
Regional Municipality	18	4,291	5,879	**10,185**
Other	11	409	761	**1,181**
Total	**951**	**73,703**	**112,632**	**187,286**

Table 3.12 **Road Jurisdiction for All Accidents 1977-1986**

Road Jurisdiction	Year										Total
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	
Municipal	122,766	128,719	136,091	135,579	135,346	126,876	119,230	136,456	128,809	120,799	**1,295,671**
Provincial	39,039	34,301	36,212	34,780	35,584	33,246	32,667	36,110	38,976	38,002	**358,917**
Township	11,597	10,834	11,905	12,909	11,573	11,476	11,330	11,628	10,562	10,092	**113,906**
County or District	8,330	7,200	7,593	6,605	6,475	5,669	5,258	6,248	7,002	7,027	**67,407**
Regional Municipality	30,817	4,620	4,742	5,562	8,220	9,722	12,592	3,393	3,166	10,185	**93,019**
Other	1,018	689	653	1,066	1,174	954	922	947	1,235	1,181	**9,839**
Total	**218,567**	**186,363**	**197,196**	**196,501**	**198,372**	**187,943**	**181,999**	**194,782**	**189,750**	**187,286**	**1,938,759**

Figure 3.4 **Road Location for All Accidents 1986**

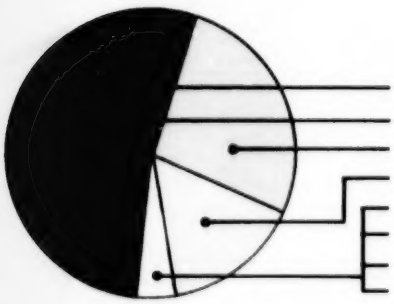


Table 3.13 **Road Location by Class of Accident 1986**

Road Location	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
Non-intersection	578	60.8	27,810	37.7	44,664	39.7	**73,052**	**39.0**
Intersection Related	57	6.0	13,146	17.8	17,718	15.7	**30,921**	**16.5**
In Intersection	191	20.1	21,762	29.5	28,675	25.5	**50,628**	**27.0**
At/Near Private Drive	87	9.1	9,828	13.3	19,672	17.5	**29,587**	**15.8**
At Railway Crossing	17	1.8	237	0.3	353	0.3	**607**	**0.3**
Underpass or Tunnel	2	0.2	167	0.2	293	0.2	**462**	**0.2**
Overpass or Bridge	19	2.0	748	1.0	1,244	1.1	**2,011**	**1.1**
Other	—	—	5	—	13	—	**18**	**—**
Total	**951**	**100.0**	**73,703**	**100.0**	**112,632**	**100.0**	**187,286**	**100.0**

Although a greater number of all accidents occur at non-intersection locations compared to intersections (39% vs 27%) this difference is particularly pronounced for fatal accidents (60.8% non-intersection vs 20.1% intersection).

Figure 3.5 **Road Surface Condition for All Accidents 1986**

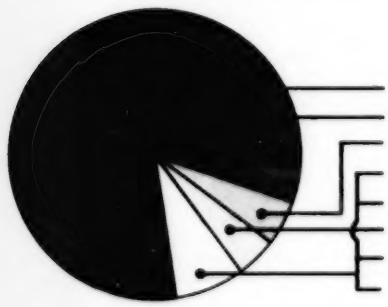


Table 3.14 **Road Surface Condition by Class of Accident 1986**

Road Surface Condition	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
Dry	646	67.9	46,146	62.6	62,828	55.8	**109,620**	**58.5**
Wet	196	20.6	18,944	25.7	29,067	25.8	**48,207**	**25.7**
Loose Snow	24	2.5	2,325	3.2	5,894	5.2	**8,243**	**4.4**
Slush	27	2.8	1,658	2.2	3,878	3.4	**5,563**	**3.0**
Packed Snow	16	1.7	1,298	1.8	3,856	3.4	**5,170**	**2.8**
Ice	33	3.5	2,719	3.7	6,320	5.6	**9,072**	**4.8**
Mud	—	—	27	—	95	0.1	**122**	**0.1**
Loose Sand or Gravel	9	0.9	586	0.8	694	0.6	**1,289**	**0.7**
Total	**951**	**100.0**	**73,703**	**100.0**	**112,632**	**100.0**	**187,286**	**100.0**

4 place of accident in ontario

Table 4.1 **Place of Accident — Estimated Population, Class of Accident, Persons Killed, Persons Injured and Vehicle Registration 1986**

Location		Estimated Population (1985)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Persons Injured	Vehicle Registrations
Ontario		**8,883,298**	**187,286**	**951**	**73,703**	**112,632**	**1,102**	**108,839**	**5,421,220**
Algoma		**123,853**	**2,522**	**22**	**953**	**1,547**	**27**	**1,415**	**79,322**
Blind River, t		3,539	31	—	20	11	—	24	
Elliot Lake, t	M	18,332	133	1	58	74	1	73	
Michipicoten, twp	M	4,503	2	—	1	1	—	4	
Sault Ste. Marie, c	M	81,718	1,477	6	538	933	6	772	
Thessalon, t		1,532	11	—	3	8	—	3	
Other Areas		14,229	868	15	333	520	20	539	
Brant		**101,212**	**2,211**	**12**	**847**	**1,352**	**16**	**1,238**	**62,134**
Brantford, c	M	75,080	1,317	4	464	849	4	638	
Brantford, twp		6,623	1	—	1	—	—	2	
Burford, twp		5,297	1	—	—	1	—	—	
Paris, t	M	7,723	99	—	38	61	—	55	
Other Areas		6,489	793	8	344	441	12	543	
Bruce		**58,092**	**852**	**12**	**311**	**529**	**15**	**524**	**40,190**
Amabel, twp		2,952	1	—	—	1	—	—	
Brant, twp		3,376	1	—	—	1	—	—	
Bruce, twp		1,637	1	—	—	1	—	—	
Chesley, t	M	1,845	11	—	5	6	—	6	
Kincardine, t	M	5,833	42	—	14	28	—	22	
Kincardine, twp		2,990	1	—	—	1	—	—	
Port Elgin, t	M	6,005	60	—	29	31	—	39	
Saugeen, twp		1,600	1	—	1	—	—	3	
Southampton, t	M	2,714	29	1	9	19	1	20	
Walkerton, t	M	4,667	65	—	13	52	—	16	
Wiarton, t	M	2,119	19	—	9	10	—	13	
Other Areas		22,354	616	11	229	376	14	405	
Cochrane		**86,609**	**1,518**	**6**	**549**	**963**	**9**	**844**	**54,212**
Cochrane, t		4,497	44	—	19	25	—	22	
Hearst, t		5,360	44	—	17	27	—	21	
Iroquois Falls, t		6,230	52	—	18	34	—	25	
Kapuskasing, t	M	11,508	83	—	23	60	—	36	
Smooth Rock Falls, t		2,251	29	1	9	19	1	20	
Timmins, c	M	45,743	655	—	216	439	—	297	
Other Areas		11,020	611	5	247	359	8	423	
Dufferin		**32,370**	**871**	**8**	**339**	**524**	**10**	**561**	**22,012**
Amaranth, twp		2,731	1	—	—	1	—	—	
Orangeville, t	M	14,408	231	2	79	150	2	123	
Shelburne, t	M	3,004	51	—	15	36	—	27	
Other Areas		12,227	588	6	245	337	8	411	

Municipal/Regional Municipal Roads

Legend
- **t** town
- **c** city
- **vl** village
- **twp** township

Other Areas — Include Provincial Highways and jurisdictions with less than 1,500 population

M Municipal police force

Table 4.1 **Continued**

Location		Estimated Population (1985)	Class of Accident: Total Accidents	Fatal	Personal Injury	Property Damage	Persons: Killed	Injured	Vehicle Registrations
Durham	M	**314,238**	**6,450**	**33**	**2,702**	**3,715**	**40**	**4,062**	**222,530**
Ajax, t		33,763	376	—	130	246	—	176	
Brock, twp		9,806	57	1	25	31	1	38	
Newcastle, t		32,712	454	3	200	251	3	324	
Oshawa, c		121,669	2,317	6	988	1,323	7	1,467	
Pickering, t		45,758	524	3	197	324	6	289	
Scugog, t		14,645	74	5	31	38	5	54	
Uxbridge, twp		11,644	64	—	30	34	—	34	
Whitby, t		44,241	672	2	332	338	2	487	
Other Areas		—	1,912	13	769	1,130	16	1,193	
Elgin		**69,284**	**1,119**	**11**	**436**	**672**	**11**	**686**	**47,562**
Aldborough, twp		2,586	1	—	—	1	—	—	
Aylmer, t	M	5,232	53	1	13	39	1	21	
Port Stanley, vl		1,914	12	—	7	5	—	10	
St. Thomas, c	M	28,218	424	2	163	259	2	243	
Southwold, twp		4,342	1	—	1	—	—	1	
Yarmouth, twp		2,565	1	—	1	—	—	1	
Other Areas		24,427	627	8	251	344	8	410	
Essex		**315,743**	**6,973**	**37**	**2,976**	**3,960**	**41**	**4,435**	**187,395**
Amherstburg, t	M	8,474	92	—	28	64	—	37	
Anderdon, twp	M	4,751	2	—	—	2	—	—	
Belle River, t		3,676	24	—	8	16	—	10	
Colchester South, twp	M	4,895	2	—	1	1	—	3	
Essex, t	M	5,978	59	—	22	37	—	27	
Harrow, t		2,302	24	—	8	16	—	11	
Kingsville, t	M	5,257	39	—	13	26	—	17	
Leamington, t	M	12,655	324	1	99	224	1	136	
Maidstone, twp		8,270	2	—	—	2	—	—	
Mersea, twp	M	8,627	5	—	2	3	—	2	
Sandwich South, twp		4,862	1	—	—	1	—	—	
Sandwich West, twp	M	13,744	8	—	2	6	—	2	
St. Clair Beach, vl	M	3,026	17	1	7	9	1	12	
Tecumseh, t		7,208	105	—	41	64	—	56	
Tilbury North, twp		3,099	1	—	—	1	—	—	
Windsor, c	M	195,028	4,570	14	1,891	2,665	14	2,784	
Other Areas		23,891	1,698	21	854	847	25	1,338	
Frontenac		**117,878**	**2,501**	**18**	**914**	**1,569**	**18**	**1,309**	**71,009**
Kingston, c	M	60,408	1,210	6	412	792	6	569	
Kingston, twp		29,561	1	—	—	1	—	—	
Pittsburgh, twp		9,567	1	—	1	—	—	1	
Portland, twp		4,250	1	—	—	1	—	—	
Other Areas		14,092	1,288	12	501	775	12	739	
Grey		**74,279**	**1,240**	**13**	**470**	**757**	**16**	**727**	**45,159**
Bentinck, twp		3,194	1	—	1	—	—	1	
Derby, twp		2,469	1	—	1	—	—	1	
Durham, t	M	2,458	19	—	5	14	—	6	
Hanover, t	M	6,284	76	—	25	51	—	27	
Meaford, t	M	4,358	38	—	10	28	—	12	
Osprey, twp		1,775	1	—	—	1	—	—	

Table 4.1 **Continued**

Location		Estimated Population (1985)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Injured	Vehicle Registrations
Owen Sound, c	M	19,698	248	1	83	164	1	127	
Other Areas		34,043	856	12	345	499	15	827	
Haldimand-Norfolk	**M**	**88,400**	**1,629**	**16**	**606**	**1,007**	**19**	**919**	**64,891**
Delhi, twp		14,796	97	1	36	60	1	59	
Dunnville, t		11,289	147	1	55	91	1	81	
Haldimand, t		17,296	91	3	30	58	4	58	
Nanticoke, c		20,071	250	3	91	156	3	131	
Norfolk, twp		10,752	60	—	25	35	—	37	
Simcoe, t		14,196	284	1	92	191	1	140	
Other Areas		—	700	7	277	416	9	413	
Haliburton		**11,541**	**343**	**3**	**139**	**201**	**4**	**215**	**8,495**
Anson, Hindon & Minden, twp		2,633	4	—	—	4	—	—	
Dysart, et al, twp		3,742	5	—	1	4	—	1	
Other Areas		5,166	334	3	138	193	4	214	
Halton	**M**	**264,498**	**5,290**	**28**	**2,072**	**3,190**	**33**	**3,037**	**178,884**
Burlington, c		115,593	1,528	5	636	887	5	887	
Halton Hills, t		34,703	527	3	195	329	4	278	
Milton, t		30,988	522	2	213	307	3	317	
Oakville, t		83,214	1,207	6	443	758	6	620	
Other Areas		—	1,506	12	585	909	15	935	
Hamilton-Wentworth	**M**	**421,264**	**8,826**	**36**	**3,866**	**4,924**	**41**	**5,625**	**232,990**
Ancaster, t		16,542	173	1	93	79	1	146	
Dundas, t		20,081	285	—	113	172	—	158	
Flamborough, twp		25,541	243	5	104	134	5	177	
Glanbrook, twp		9,446	35	—	18	17	—	26	
Hamilton, c		307,690	5,918	12	2,686	3,220	12	3,753	
Stoney Creek, t		41,964	491	2	194	295	2	290	
Other Areas		—	1,681	16	658	1,007	21	1,075	
Hastings		**107,863**	**2,157**	**20**	**779**	**1,358**	**24**	**1,210**	**74,057**
Bancroft, vl		2,366	30	—	7	23	—	14	
Belleville, c	M	36,720	716	2	224	490	2	297	
Deseronto, t	M	1,849	13	—	6	7	—	6	
Frankford, vl		1,922	11	—	2	9	—	7	
Sidney, twp		15,951	1	—	1	—	—	1	
Stirling, vl	M	1,795	24	1	7	16	1	7	
Trenton, c	M	15,068	288	3	97	188	3	132	
Tweed, vl	M	1,634	23	—	5	18	—	11	
Other Areas		30,558	1,051	14	430	607	18	729	
Huron		**55,553**	**887**	**12**	**321**	**554**	**15**	**497**	**34,936**
Clinton, t	M	3,119	46	—	12	34	—	18	
Exeter, t	M	3,706	69	1	26	42	1	32	
Goderich, t	M	7,282	113	—	36	77	—	54	
Goderich, twp		2,212	1	—	1	—	—	1	
Hay, twp		1,905	2	—	1	1	—	1	
Seaforth, t	M	2,153	19	—	4	15	—	7	
Turnberry, twp		1,524	1	—	—	1	—	—	
Wingham, t	M	2,941	37	—	11	26	—	14	
Other Areas		30,711	599	11	230	358	14	370	

Table 4.1 **Continued**

Location		Estimated Population (1985)	Class of Accident				Persons		Vehicle Registrations
			Total Accidents	Fatal	Personal Injury	Property Damage	Killed	Injured	
Kenora		**36,322**	**1,158**	**12**	**365**	**781**	**15**	**554**	**31,976**
Dryden, t	M	6,431	101	—	25	76	—	30	
Ear Falls, twp		1,800	1	—	—	1	—	—	
Ignace, twp		2,345	5	—	3	2	—	4	
Keewatin, t		1,919	20	—	6	14	—	8	
Kenora, t	M	9,574	167	—	52	115	—	69	
Red Lake, twp		2,078	7	—	1	6	—	1	
Sioux Lookout, t		2,996	54	—	14	40	—	20	
Other Areas		9,179	803	12	264	527	15	422	
Kent		**105,476**	**2,051**	**15**	**824**	**1,212**	**16**	**1,176**	**73,291**
Blenheim, t		4,175	39	—	10	29	—	16	
Camden, twp		2,291	1	—	1	—	—	1	
Chatham, c	M	41,586	742	—	305	437	—	404	
Dover, twp		4,013	1	—	—	1	—	—	
Dresden, t	M	2,568	32	—	10	22	—	13	
Harwich, twp		6,134	2	—	1	1	—	1	
Raleigh, twp		5,702	1	1	—	—	1	5	
Ridgetown, t		3,152	26	—	10	16	—	14	
Tilbury, t	M	4,154	79	—	21	58	—	35	
Wallaceburg, t	M	11,373	214	—	83	131	—	106	
Wheatley, vl		1,528	9	—	4	5	—	4	
Other Areas		18,800	905	14	371	512	15	573	
Lambton		**122,091**	**2,262**	**17**	**870**	**1,375**	**19**	**1,299**	**79,148**
Bosanquet, twp		4,366	1	—	1	—	—	1	
Brooke, twp		1,995	1	—	—	1	—	—	
Forest, t		2,614	18	—	6	12	—	8	
Petrolia, t	M	4,284	43	1	8	34	1	11	
Point Edward, vl	M	2,313	47	1	19	27	1	28	
Sarnia, c	M	49,091	1,091	3	415	673	3	622	
Sarnia, twp	M	23,293	3	—	—	3	—	—	
Wyoming, vl		1,791	12	—	3	9	—	4	
Other Areas		32,344	1,046	12	426	616	14	625	
Lanark		**48,400**	**1,021**	**8**	**339**	**674**	**11**	**502**	**32,046**
Almonte, t		4,028	30	—	10	20	—	14	
Carleton Place, t	M	6,360	105	1	33	71	1	51	
Pakenham, twp		1,551	1	—	—	1	—	—	
Perth, t	M	5,699	115	1	47	67	1	66	
Smiths Falls, t	M	9,118	225	1	65	159	1	84	
Other Areas		21,644	545	5	184	356	8	287	
Leeds & Grenville		**83,176**	**1,765**	**17**	**620**	**1,128**	**22**	**943**	**53,936**
Brockville, c	M	20,760	481	1	132	348	1	188	
Cardinal, vl	M	1,651	2	—	1	1	—	1	
Gananoque, t	M	4,844	52	—	15	37	—	18	
Kemptville, t	M	2,496	9	—	1	8	—	1	
Oxford-on-Rideau, twp		4,420	1	—	1	—	—	1	
Prescott, t	M	4,584	72	—	19	53	—	32	
R. Leeds & Lansdowne, twp		4,289	1	—	—	1	—	—	
Other Areas		40,132	1,147	16	451	680	21	702	

Table 4.1 **Continued**

Location		Estimated Population (1985)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Injured	Vehicle Registrations
Lennox & Addington		**33,094**	**648**	**7**	**249**	**392**	**10**	**388**	**18,983**
Camden East, twp		3,818	4	—	1	3	—	3	
Napanee, t	M	4,452	97	1	41	55	2	61	
Richmond, twp		3,531	1	—	—	1	—	—	
Other Areas		21,293	546	6	207	333	8	324	
Manitoulin		**6,779**	**209**	**2**	**70**	**137**	**2**	**101**	**6,353**
Middlesex		**338,278**	**6,869**	**35**	**2,915**	**3,919**	**38**	**4,322**	**197,807**
Delaware, twp		2,107	1	—	1	—	—	3	
Glencoe, vl		1,713	16	—	4	12	—	4	
London, c	M	276,000	5,134	11	2,193	2,930	12	3,109	
London, twp		5,816	1	—	—	1	—	—	
Lucan, vl		1,671	10	—	3	7	—	4	
Strathroy, t	M	9,051	103	—	46	57	—	64	
Westminster, twp		6,159	3	—	1	2	—	1	
Other Areas		35,761	1,601	24	667	910	26	1,137	
Muskoka		**37,941**	**1,155**	**19**	**428**	**708**	**24**	**635**	**27,822**
Bracebridge, t		9,322	113	—	39	74	—	47	
Georgian Bay, twp		1,857	—	—	—	—	—	—	
Gravenhurst, t		8,421	90	2	39	49	2	50	
Huntsville, t		11,438	99	—	30	69	—	37	
Lake of Bays, twp		2,141	1	—	1	—	—	4	
Muskoka Lakes, twp		4,762	1	—	—	1	—	—	
Other Areas		—	851	17	319	515	22	497	
Niagara	**M**	**369,312**	**8,347**	**36**	**3,073**	**5,238**	**43**	**4,466**	**230,050**
Fort Erie, t		24,073	475	3	183	289	4	267	
Grimsby, t		16,719	212	1	82	129	1	129	
Lincoln, t		14,404	201	3	76	122	5	111	
Niagara Falls, c		71,088	1,543	5	549	989	5	802	
Niagara-on-the-Lake, t		12,359	170	1	58	111	1	108	
Pelham, t		11,835	143	1	55	87	1	93	
Port Colborne, c		18,653	266	1	91	174	1	115	
St. Catharines, c		123,014	2,373	6	861	1,506	6	1,152	
Thorold, c		16,086	203	2	66	135	2	93	
Wainfleet, twp		5,983	28	—	8	20	—	25	
Welland, c		45,173	898	5	345	548	5	461	
West Lincoln, twp		9,925	53	1	19	33	2	30	
Other Areas		—	1,782	7	680	1,095	10	1,080	
Nipissing		**73,733**	**1,504**	**6**	**610**	**888**	**6**	**906**	**44,985**
Bonfield, twp		1,738	1	—	1	—	—	4	
Caldwell, twp		1,555	2	—	2	—	—	3	
Mattawa, t		2,571	1	—	1	—	—	2	
North Bay, c	M	50,437	692	1	262	429	1	352	
Sturgeon Falls, t	M	5,836	78	—	37	41	—	45	
Other Areas		11,596	792	5	307	418	5	500	
Northumberland		**66,568**	**1,435**	**22**	**594**	**819**	**29**	**956**	**32,825**
Brighton, t		3,456	32	—	9	23	—	12	
Campbellford, t		3,402	36	2	11	23	3	13	
Cobourg, t	M	13,064	231	1	85	145	1	137	
Colborne, vl		1,879	20	—	9	11	—	12	

Table 4.1 **Continued**

Location		Estimated Population (1985)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Injured	Vehicle Registrations
Cramahe, twp		2,486	2	—	—	2	—	—	
Haldimand, twp		3,484	1	—	—	1	—	—	
Murray, twp		5,879	3	—	—	3	—	—	
Port Hope, t	M	10,462	76	1	34	41	1	43	
Other Areas		22,456	1,034	18	446	570	24	739	
Ottawa-Carleton		**599,688**	**13,219**	**51**	**4,175**	**8,993**	**54**	**5,742**	**325,236**
Cumberland, twp		24,707	161	4	69	88	4	96	
Gloucester, c	M	86,553	781	3	295	483	3	421	
Goulbourn, twp		11,824	110	—	37	73	—	58	
Kanata, c		26,133	331	1	110	220	1	152	
Nepean, c	M	92,751	1,230	5	415	810	5	591	
Osgoode, twp		10,850	139	3	49	87	3	72	
Ottawa, c	M	304,448	7,557	18	2,237	5,302	18	2,962	
Rideau, twp		10,017	110	4	37	69	4	49	
Rockcliffe Park, vl		2,323	15	—	3	12	—	4	
Vanier, c		18,803	356	—	107	249	—	141	
West Carleton, twp		11,279	53	—	21	32	—	34	
Other Areas		—	1,729	11	568	1,150	11	843	
Oxford		**84,757**	**1,805**	**14**	**684**	**1,107**	**18**	**1,044**	**56,504**
East Zorra-Tavistock, twp	M	7,082	10	—	3	7	—	3	
Ingersoll, t	M	8,469	131	—	40	91	—	57	
Norwich, twp	M	9,507	24	—	10	14	—	13	
South-West Oxford, twp		8,270	1	—	—	1	—	—	
Tillsonburg, t	M	10,563	150	—	61	89	—	85	
Woodstock, c	M	26,183	553	—	204	349	—	278	
Zorra, twp		8,060	1	—	1	—	—	1	
Blandford-Blenheim, twp		6,623	1	—	—	1	—	—	
Other Areas		—	934	14	365	555	18	607	
Parry Sound		**29,498**	**948**	**16**	**326**	**606**	**19**	**545**	**24,099**
Himsworth North, twp		2,662	2	—	—	2	—	—	
McDougall, twp		1,703	1	—	1	—	—	1	
Parry Sound, t	M	5,813	45	—	13	32	—	19	
Other Areas		19,320	900	16	312	572	19	525	
Peel	**M**	**565,871**	**11,541**	**41**	**4,563**	**6,937**	**47**	**6,913**	**369,872**
Brampton, c		177,675	2,565	4	1,057	1,504	5	1,603	
Caledon, t		28,701	653	10	268	375	10	418	
Mississauga, c		359,495	5,834	15	2,234	3,585	18	3,229	
Other Areas		—	2,489	12	1,004	1,473	14	1,663	
Perth		**66,333**	**1,135**	**13**	**383**	**739**	**15**	**567**	**41,595**
Listowel, t	M	5,072	65	—	12	53	—	20	
Mitchell, t	M	2,947	47	—	14	33	—	20	
St. Marys, t	M	5,009	54	—	15	39	—	16	
Stratford, c	M	26,361	450	1	138	311	1	189	
Other Areas		26,944	519	12	204	303	14	322	
Peterborough		**102,740**	**2,056**	**13**	**819**	**1,224**	**16**	**1,247**	**62,000**
Cavan, twp		4,043	3	—	1	2	—	1	
Lakefield, vl	M	2,318	30	—	11	19	—	19	
Peterborough, c	M	61,330	1,059	2	421	636	2	583	
Other Areas		35,049	964	11	386	567	14	644	

Table 4.1 **Continued**

Location		Estimated Population (1985)	Class of Accident: Total Accidents	Fatal	Personal Injury	Property Damage	Persons: Killed	Injured	Vehicle Registrations
Prescott & Russell		**56,553**	**1,005**	**7**	**368**	**630**	**7**	**537**	**49,287**
Casselman, vl		1,844	18	1	3	14	1	5	
Hawkesbury, t	M	9,716	133	—	33	100	—	52	
L'Orignal, vl		1,904	9	-	6	3	—	7	
Rockland, t		4,689	52	—	17	35	—	21	
Vankleek Hill, t		1,773	17	—	3	14	—	5	
Other Areas		36,627	776	6	306	464	6	447	
Prince Edward		**22,228**	**369**	**5**	**132**	**232**	**5**	**199**	**14,954**
Hallowell, twp		4,467	2	—	—	2	—	—	
Hillier, twp		1,611	2	—	1	1	—	1	
Picton, t	M	4,177	71	—	25	46	—	42	
Other Areas		11,973	294	5	106	183	5	156	
Rainy River		**19,645**	**468**	**2**	**144**	**322**	**2**	**198**	**15,049**
Atikokan, twp		4,442	1	—	1	—	—	2	
Fort Francis, t	M	8,673	174	1	47	126	1	60	
Other Areas		6,530	293	1	96	196	1	136	
Renfrew		**86,991**	**1,455**	**14**	**534**	**907**	**16**	**835**	**56,829**
Arnprior, t	M	5,891	55	—	21	34	—	27	
Deep River, t	M	4,614	8	—	5	3	—	7	
Pembroke, c	M	13,966	238	1	78	159	1	113	
Petawawa, vl		5,288	11	—	5	6	—	9	
Renfrew, t	M	8,166	109	1	36	72	1	55	
Ross, twp		1,716	1	—	—	1	—	—	
Other Areas		47,350	1,034	12	389	632	14	624	
Simcoe		**231,711**	**5,485**	**37**	**1,950**	**3,498**	**39**	**2,961**	**143,851**
Alliston, t	M	4,674	66	—	23	43	—	27	
Barrie, c	M	47,409	995	1	319	675	1	455	
Beeton, vl		2,105	21	—	6	15	—	6	
Bradford, t	M	8,056	126	—	35	91	—	49	
Collingwood, t	M	12,035	211	—	82	129	—	118	
Essa, twp		13,860	6	—	4	2	—	5	
Innisfil, twp		13,128	3	—	1	2	—	1	
Medonte, twp		4,323	1	—	—	1	—	—	
Midland, t	M	12,049	195	2	72	121	2	105	
Nottawasaga, twp		4,722	1	—	—	1	—	—	
Orillia, c	M	23,786	341	2	138	201	2	198	
Penetanguishene, t	M	5,449	76	—	22	54	—	27	
Port McNicoll, vl		1,926	9	—	6	3	—	8	
Stayner, t		2,730	23	—	8	15	—	9	
Sunnidale, twp		2,309	1	—	—	1	—	—	
Tay, twp		5,995	1	—	—	1	—	—	
Tecumseth, twp		6,728	1	—	—	1	—	—	
Tiny, twp		7,245	4	—	3	1	—	4	
Tottenham, vl		2,987	29	1	4	24	1	5	
Vespra, twp		5,762	1	—	—	1	—	—	
Wasaga Beach, t		4,588	103	1	48	54	1	67	
West Gwillimbury, twp		4,205	1	—	1	—	—	1	
Other Areas		35,640	3,270	30	1,178	2,062	32	1,876	

Table 4.1 Continued

Location		Estimated Population (1985)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Persons Injured	Vehicle Registrations
Stormont, Dundas and Glengarry		**101,510**	**2,024**	**16**	**721**	**1,287**	**16**	**1,046**	**63,658**
Alexandria, t	M	3,314	77	—	23	54	—	26	
Cornwall, c	M	45,980	949	—	325	624	—	439	
Cornwall, twp		5,384	3	—	2	1	—	2	
Finch, twp		2,320	1	—	1	—	—	1	
Matilda, twp		3,161	1	—	1	—	—	1	
Morrisburg, vl		2,306	23	—	6	17	—	7	
Winchester, vl		2,055	14	—	4	10	—	4	
Winchester, twp		3,089	11	—	—	11	—	—	
Other Areas		33,901	945	16	359	570	16	566	
Sudbury District		**18,208**	**817**	**16**	**317**	**484**	**18**	**484**	**103,906**
Espanola, t	M	5,535	37	—	16	21	—	23	
Other Areas		12,673	780	16	301	463	18	461	
Sudbury Regional Municipality	**M**	**154,387**	**2,452**	**12**	**1,032**	**1,408**	**15**	**1,534**	**Included in District of Sudbury**
Capreol, t		3,722	24	—	9	15	—	13	
Nickel Centre, t		11,548	70	—	31	39	—	43	
Onaping Falls, t		5,614	27	—	13	14	—	22	
Rayside-Balfour, t		14,183	70	2	34	34	2	47	
Sudbury, c		90,453	1,857	5	758	1,094	7	1,106	
Valley East, t		19,326	182	2	98	82	3	159	
Walden, t		9,541	60	—	21	39	—	25	
Other Areas		—	162	3	68	91	3	119	
Thunder Bay		**143,908**	**4,115**	**26**	**1,276**	**2,813**	**34**	**1,852**	**100,817**
Geraldton, t		2,821	20	—	4	16	—	6	
Longlac, t		2,258	16	—	1	15	—	2	
Manitouwadge, twp		3,472	28	—	5	23	—	5	
Marathon, twp	M	3,054	6	—	2	4	—	2	
Nipigon, twp		2,392	14	—	4	10	—	7	
Red Rock, twp	M	1,513	4	—	—	4	—	—	
Schreiber, twp		1,891	15	—	3	12	—	4	
Terrace Bay, twp	M	2,632	17	—	2	15	—	2	
Thunder Bay, c	M	112,518	2,762	10	819	1,933	11	1,134	
Other Areas		11,357	1,233	16	436	780	23	601	
Timiskaming		**37,312**	**811**	**11**	**273**	**527**	**13**	**402**	**23,625**
Cobalt, t		1,622	15	—	3	12	—	3	
Englehart, t		1,737	12	—	4	8	—	7	
Haileybury, t		4,965	35	—	8	27	—	12	
Kirkland Lake, t	M	11,854	138	2	34	102	2	51	
New Liskeard, t	M	5,234	64	—	20	44	—	24	
Other Areas		11,900	547	9	204	334	11	305	
Toronto, Metropolitan	**M**	**2,154,537**	**46,547**	**95**	**20,048**	**26,404**	**102**	**28,394**	**Included in Regional Municipality of York**
Etobicoke, c		298,490	4,470	12	1,989	2,469	12	2,821	
Scarborough, c		461,957	7,008	24	3,088	3,896	28	4,588	
Toronto, c		606,247	15,222	23	6,472	8,727	25	8,741	
York, c		133,856	1,690	2	705	983	2	1,033	
York E., borough		97,676	1,141	2	455	684	2	605	
York, N., c		556,308	9,816	11	4,521	5,284	12	6,692	
Other Areas		—	7,200	21	2,818	4,361	—	—	

Table 4.1 **Continued**

Location		Estimated Population (1985)	Class of Accident: Total Accidents	Fatal	Personal Injury	Property Damage	Persons: Killed	Injured	Vehicle Registrations
Victoria		**51,528**	**1,088**	**13**	**401**	**674**	**17**	**693**	**33,191**
Bobcaygeon, vl		1,758	12	—	2	10	—	3	
Emily, twp		4,796	2	—	1	1	—	1	
Fenelon Falls, vl		1,739	23	—	5	18	—	7	
Lindsay, t	M	14,626	244	—	81	163	—	149	
Other Areas		28,609	807	13	312	481	17	533	
Waterloo	**M**	**328,224**	**6,729**	**24**	**2,610**	**4,095**	**31**	**3,772**	**196,656**
Cambridge, c		77,843	1,430	7	590	833	8	862	
Kitchener, c		147,439	2,636	2	1,025	1,609	2	1,459	
North Dumfries, twp		5,082	46	2	18	26	2	24	
Waterloo, c		63,265	1,107	4	451	652	4	634	
Wellesley, twp		6,916	22	—	10	12	—	11	
Wilmot, twp		11,018	63	—	24	39	—	26	
Woolwich, twp		16,661	84	—	33	51	—	60	
Other Areas		—	6,741	9	459	873	15	696	
Wellington		**139,758**	**2,815**	**17**	**1,179**	**1,619**	**19**	**1,819**	**86,888**
Arthur, vl		1,765	20	—	3	17	—	3	
Elora, vl		2,690	24	—	7	17	—	8	
Eramosa, twp		4,564	1	—	1	—	—	2	
Erin, vl		2,270	11	—	4	7	—	6	
Erin, twp		6,221	3	—	—	3	—	—	
Fergus, t	M	6,234	76	—	23	53	—	34	
Guelph, c	M	79,857	1,136	4	499	633	4	721	
Guelph, twp		2,939	6	—	2	4	—	3	
Harriston, t	M	1,948	19	—	10	9	—	19	
Mount Forest, t	M	3,599	38	—	11	27	—	23	
Nichol, twp		3,507	4	—	—	4	—	—	
Palmerston, t	M	2,067	10	—	3	7	—	3	
Puslinch, twp		4,608	1	—	—	1	—	—	
West Garafraxa, twp		2,559	2	—	—	2	—	—	
Other Areas		14,930	1,464	13	616	825	15	997	
York	**M**	**324,064**	**6,593**	**29**	**2,531**	**4,033**	**29**	**4,503**	**1,370,520**
Aurora, t		19,438	319	1	100	218	1	136	
East Gwillimbury, t		13,991	108	—	35	73	—	66	
Georgina, t		20,898	80	2	25	53	2	39	
King, twp		15,733	277	3	100	174	3	144	
Markham, t		105,341	1,170	1	400	769	1	575	
Newmarket, t		33,186	382	—	116	266	—	159	
Richmond Hill, t		44,358	554	3	226	325	3	327	
Vaughan, t		56,766	1,071	4	410	657	4	653	
Whitchurch-Stouffville, t		14,353	106	2	44	60	2	86	
Other Areas		—	2,526	13	1,075	1,438	13	1,841	
Vehicle Registration Location Not Recorded									**27,883**

5 the vehicle

The majority of vehicles involved in accidents in Ontario are passenger vehicles; approximately 75 percent.

Ninety-three percent of vehicles involved in accidents were reported as having no apparent defects. The remaining 7 percent of vehicles involved in accidents were reported as defective or the condition of the vehicle was unknown. The most common types of defects reported were for tires and brakes.

5a. vehicles in accidents

Table 5.1 Type of Vehicle by Class of Accident 1986

Class of Driver Licence Required		Type of Vehicle	Class of Accident			Total
			Fatal	Personal Injury	Property Damage	
Passenger vehicles	G	Passenger car/station wagon	980	101,140	155,700	**257,820**
	G	Taxi/limousine	1	245	350	**596**
	G	Hearse	—	—	6	**6**
	G	Dune buggy	—	7	2	**9**
	F	Ambulance	—	59	71	**130**
	G	Fire department vehicle	1	2	5	**8**
	G	Police force vehicle	2	212	207	**421**
	G	Public utility emergency vehicle	—	—	—	**—**
	G	Other passenger vehicle	4	239	296	**539**
		Subtotal	**988**	**101,904**	**156,637**	**259,529**
		Percentage of all vehicles	**61.9**	**74.2**	**75.0**	**74.6**
		Percentage of all vehicles over 5 years	**62.2**	**74.5**	**76.3**	**75.6**
Passenger vehicles and trailers	G	P.V. and house trailer	1	9	27	**37**
	G	P.V. and boat trailer	—	33	78	**111**
	G	P.V. and tent trailer	1	14	34	**49**
	G	P.V. and utility trailer	—	7	35	**42**
	G	P.V. and other trailer	3	101	276	**380**
	G	Other P.V. and trailer	—	9	14	**23**
		Subtotal	**5**	**173**	**464**	**642**
		Percentage of all vehicles	**0.3**	**0.1**	**0.2**	**0.2**
		Percentage of all vehicles over 5 years	**0.3**	**0.2**	**0.2**	**0.2**
Trucks	D	Truck with concrete mixer	1	29	63	**93**
	D	Truck with stake or platform body	2	262	548	**812**
	D	Truck with tank body	1	44	107	**152**
	D	Truck with dump body	20	489	1,072	**1,581**
	G	Tow truck	1	125	177	**303**
	D	Tractor not pulling a trailer	5	86	173	**264**
	G	Pick-up truck	157	9,967	18,893	**29,017**
	G	Passenger van	34	1,878	3,215	**5,127**
	G	Delivery van	57	4,726	8,596	**13,379**
	G	Pick-up camper	1	5	10	**16**
	D	Fire truck	—	20	36	**56**
	D	Other truck	10	540	1,384	**1,934**
	G	Other truck	7	715	1,529	**2,251**
	D	Tow truck	—	5	23	**28**
		Subtotal	**298**	**18,891**	**35,826**	**55,013**
		Percentage of all vehicles	**18.6**	**13.8**	**17.2**	**15.8**
		Percentage of all vehicles over 5 years	**16.7**	**12.6**	**15.4**	**14.4**

Table 5.1 Continued

Class of Driver Licence Required		Type of Vehicle	Class of Accident			Total
			Fatal	Personal Injury	Property Damage	
Truck and	G	Pick-up and recreation trailer	—	4	12	**16**
trailer	G	Pick-up and recreation semi-trailer	1	—	5	**6**
	G	Pick-up and other semi-trailer	6	215	484	**705**
	D	Truck/trailer-dump	1	7	21	**29**
	D	Truck/trailer-frame	—	—	2	**2**
	D	Truck/trailer-tank	1	—	1	**2**
	D	Truck/trailer-stake or platform body	—	3	18	**21**
	D	Truck/trailer-van	—	3	4	**7**
	D	Truck and pole trailer	—	1	1	**2**
	G	Tow truck hauling a disabled vehicle	1	17	65	**83**
	D	Other truck/trailer	—	13	34	**47**
	G	Other truck/trailer	—	5	15	**20**
	A	Other truck/trailer	—	52	136	**188**
	D	Tow truck hauling a disabled vehicle	—	5	15	**20**
		Subtotal	**10**	**325**	**813**	**1,148**
		Percentage of all vehicles	**0.6**	**0.2**	**0.4**	**0.3**
		Percentage of all vehicles over 5 years	**0.5**	**0.2**	**0.3**	**0.3**
Tractor and	A	Tractor/semi-trailer-dump	3	78	130	**211**
semi-	A	Tractor/semi-trailer-frame	1	29	53	**83**
trailers	A	Tractor/semi-trailer-tank	2	58	119	**179**
	A	Tractor/semi-trailer-stake or platform	2	74	153	**229**
	A	Tractor/semi-trailer-van	13	182	327	**522**
	A	Tractor/semi-trailer-concrete mixer	—	1	3	**4**
	A	Tractor/semi-trailer-float	5	87	194	**286**
	A	Tractor/semi-trailer-car transport	—	5	13	**18**
	A	Tractor/semi-trailer-other	73	1,379	3,212	**4,664**
	A	Tractor/semi-trailer and pup-dump	1	4	20	**25**
	A	Tractor/semi-trailer and pup-frame	—	1	1	**2**
	A	Tractor/semi-trailer and pup-tank	—	4	9	**13**
	A	Tractor/semi-trailer and pup-stake or platform	2	3	9	**14**
	A	Tractor/semi-trailer and pup-van	1	4	8	**13**
	A	Tractor/semi-trailer and pup-other	6	54	90	**150**
	A	Tractor/semi-trailer and semi-trailer-tank	—	2	3	**5**
	A	Tractor/semi-trailer/semi-trailer stake or platform	—	4	6	**10**
	A	Tractor/semi-trailer and semi-trailer-van	—	—	1	**1**
	A	Tractor/semi-trailer and semi-trailer-other	—	18	26	**44**
		Subtotal	**109**	**1,987**	**4,377**	**6,473**
		Percentage of all vehicles	**6.8**	**1.4**	**2.1**	**1.9**
		Percentage of all vehicles over 5 years	**6.5**	**1.4**	**1.8**	**1.7**
Bus	C	Transit — intercity	—	53	105	**158**
	C	Transit — urban	7	813	1,163	**1,983**
	F	Coach — intercity	—	6	5	**11**
	F	Coach — urban	—	40	72	**112**
		Subtotal	**7**	**912**	**1,345**	**2,264**
		Percentage of all vehicles	**0.4**	**0.7**	**0.6**	**0.7**
		Percentage of all vehicles over 5 years	**0.5**	**0.8**	**0.7**	**0.7**

Table 5.1 Type of Vehicle by Class of Accident 1986

Class of Driver Licence Required		Type of Vehicle	Class of Accident			Total
				Personal	Property	
			Fatal	Injury	Damage	
School vehicles	E	School bus or school van — seating capacity 10-23	—	63	101	**164**
	B	School bus — seating capacity 24 or over	4	260	547	**811**
	G	School van — seating capacity under 10	—	4	8	**12**
	G	Station wagon	—	1	3	**4**
	C	Other bus	—	10	26	**36**
		Subtotal	**4**	**338**	**685**	**1,027**
		Percentage of all vehicles	**0.3**	**0.2**	**0.3**	**0.3**
		Percentage of all vehicles over 5 years	**0.3**	**0.2**	**0.3**	**0.3**
Other motor vehicles	G	Motor home	2	36	89	**127**
	M	Motorcycle	110	5,268	530	**5,908**
	G	Moped	—	29	2	**31**
		Subtotal	**112**	**5,333**	**621**	**6,066**
		Percentage of all vehicles	**7.0**	**3.9**	**0.3**	**1.8**
		Percentage of all vehicles over 5 years	**7.8**	**4.4**	**0.3**	**1.8**
Non-motor vehicles	G	Snowmobile	—	71	21	**92**
		Farm tractor	2	77	155	**234**
		Tractor or construction equipment	—	80	190	**270**
		Train	15	76	108	**199**
		Street car	—	104	252	**356**
		Bicycle	31	4,742	69	**4,842**
		Snow plow	1	2	9	**12**
		Go-cart	—	2	—	**2**
		Horse and buggy	—	6	3	**9**
		Other	—	12	13	**25**
		Subtotal	**49**	**5,172**	**820**	**6,041**
		Percentage of all vehicles	**3.1**	**3.8**	**0.4**	**1.7**
		Percentage of all vehicles over 5 years	**4.2**	**3.9**	**0.4**	**1.7**
		Unknown	**16**	**2,387**	**7,392**	**9,795**
		Percentage of all vehicles	**1.0**	**1.7**	**3.5**	**2.8**
		Percentage of all vehicles over 5 years	**0.7**	**2.0**	**4.3**	**3.4**
		Total	**1,596**	**137,422**	**208,980**	**347,998**

Table 5.2 Condition of Vehicle by Class of Accident 1986

Condition of Vehicle	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
No Apparent Defect	1,361	129,319	193,181	**323,861**
Service Brakes Defective	8	713	639	**1,360**
Steering Defective	—	123	136	**259**
Tire Puncture or Blow Out	3	314	491	**808**
Tire Tread Insufficient	25	322	331	**678**
Headlamps Defective	4	111	61	**176**
Other Lamps or Reflectors Defective	6	152	292	**450**
Engine Controls Defective	4	186	372	**562**
Wheels or Suspension Defective	1	90	216	**307**
Vision Obscured	1	61	100	**162**
Trailer Hitch Defective	—	14	93	**107**
Other Defects	26	727	1,249	**2,002**
Unknown	157	5,290	11,819	**17,266**
Total	**1,596**	**137,422**	**208,980**	**347,998**

Of the 6,871 vehicles with defects involved in accidents, the most common of these were: service brakes defective (19.8%), tire puncture or blow out (11.8%) and insufficient tire tread (9.9%).

Table 5.3 Model Year of Vehicle by Class of Accident 1986

Model Year of Vehicle	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
1987	8	690	1,224	**1,922**
1986	136	12,574	19,597	**32,307**
1985	191	16,097	24,620	**40,908**
1984	167	13,767	21,259	**35,193**
1983	96	9,460	13,910	**23,466**
1982	91	8,868	12,712	**21,671**
1981	117	10,881	16,551	**27,549**
1980	122	10,543	16,452	**27,117**
1979	119	10,361	16,552	**27,032**
1978	116	10,047	15,530	**25,693**
1977 and Earlier	379	25,974	41,304	**67,657**
Unknown	54	8,160	9,269	**17,483**
Total	**1,596**	**137,422**	**208,980**	**347,998**

Table 5.4 Insurance Status of Vehicle by Class of Accident 1986

Insurance	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Insured	1,470	126,546	196,108	**324,124**
Not Insured	71	4,143	1,708	**5,922**
Unknown	55	6,733	11,164	**17,952**
Total	**1,596**	**137,422**	**208,980**	**347,998**

5b. putting the vehicle in context

Table 5.5 **Vehicle Population by Type of Vehicle 1986**

Vehicle Class	Active
Passenger	4,244,200
Motorcycle	144,643
Moped	6,628
Commercial	907,744
Bus	17,026
School Bus	8,635
Motorized Snow Vehicle	237,806
Off-Road Vehicle	53,943
Road Building Machinery	1,009
Permanent Apparatus	4,188
Farm Trucks	33,204
Total	**5,659,026**

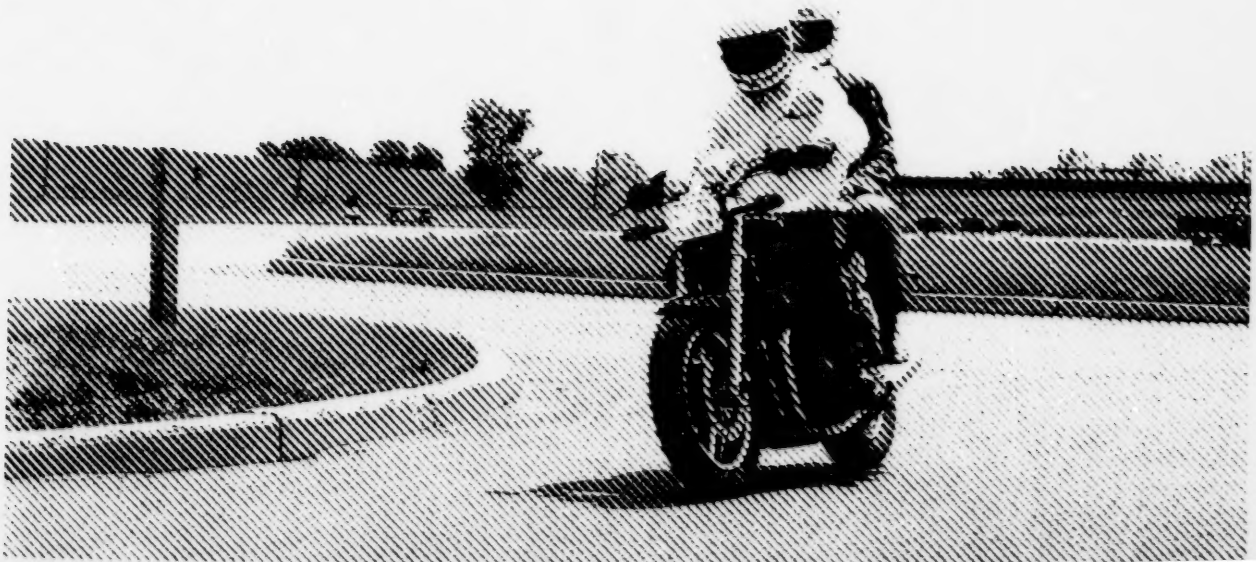
Table 5.6 **Selected Types of Vehicles by Model Year 1986**

Vehicle Class	Model Years											Total
	87	86	85	84	83	82	81	80	79	78	77+	
Passenger	93,563	476,712	449,837	406,248	285,939	259,569	341,920	342,757	346,219	338,225	903,211	**4,244,200**
Motorcycle	60	4,651	11,833	17,587	18,098	20,422	12,563	8,830	8,860	9,504	32,235	**144,643**
Moped	—	77	118	134	324	411	406	271	311	255	4,321	**6,628**
Commercial	19,139	102,489	91,268	75,055	46,005	42,840	69,971	65,513	82,914	71,306	279,645	**946,145**
Bus	216	2,281	2,682	2,285	1,895	1,853	2,198	1,873	1,788	1,726	6,864	**25,661**
Motorized Snow Vehicle	6,869	8,976	7,739	5,499	6,105	9,572	12,732	24,703	21,641	14,705	119,265	**237,806**
Off-Road Vehicle	1,081	8,048	10,712	12,648	9,170	4,214	1,923	1,083	962	818	3,284	**53,943**
Total	**120,928**	**603,234**	**574,189**	**519,456**	**367,536**	**338,881**	**441,713**	**445,030**	**462,695**	**436,539**	**1,348,825**	**5,659,026**

This table reports the registered vehicle population as of December 31, 1986, broken down by model year and vehicle class.

6 vehicles of special interest

Motorcycles, school vehicles, off-road vehicles, trucks and motorized snow vehicles have been identified as vehicles of special interest because they have unusual accident or population trends, unique operating characteristics or have caused public concern.



6a. motorcycles

Table 6.1 **Motorcyclists Killed and Injured 1982-1986**

Year	Drivers		Passengers	
	Killed	Injured	Killed	Injured
1982	104	4,711	22	930
1983	95	5,069	18	941
1984	116	5,272	19	1,017
1985	97	5,327	23	920
1986	99	5,012	15	870

Over this five year period total motorcycle fatalities and injuries peaked in 1984 and declined in 1985 and again in 1986.

Figure 6.1 **Registered Motorcycles and Licensed Motorcyclists 1977-1986**

In 1986, the population of licensed motorcyclists grew to 410,781. The number of vehicle registrations for motorcycles was 144,643.

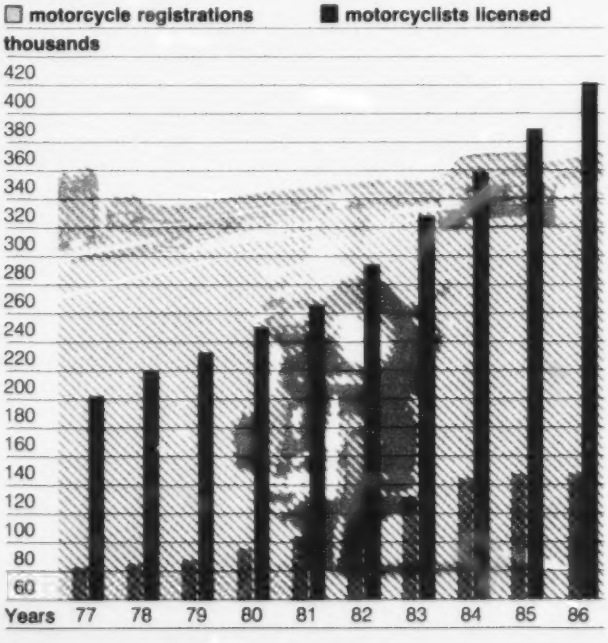


Table 6.2 **Selected Factors Relevant to Fatal Motorcycle Accidents 1986**

Factors	%
Unlicensed Motorcycle Drivers	32
Under 25 Years Old	62
Valid "M" Licence Less Than One Year	20
Alcohol Used (Driver Fatalities)	46
Helmet Not Worn (Fatalities)	10
Motorcycle Driver Error	
Speed Too Fast/Lost Control	68
Other Error	7
Single Vehicle Accidents	46
Day/Night	61/39
Weekend	46

Inexperience, alcohol use and excessive operating speeds continue to be significant factors in fatal motorcycle accidents.

Also, approximately one-third of the drivers involved in these accidents were not licensed to drive a motorcycle. These operators either had a class "G" (car) licence only, had an "M" (motorcycle) licence which was under suspension or had no driver's licence at all.

6b. school vehicles

Table 6.3 **Pupils Transported Daily, Total Accidents and Injury Rate Per 100,000 Pupils — School Years 1981/82-1985/86**

School Year	Pupils Transported Daily	Total Number of Accidents	Injury Rate Per 100,000 Pupils	
			Fatal	Non-Fatal
1981/82	597,331	861	0.2	45
1982/83	604,370	808	0.7	27
1983/84	602,898	900	0.3	39
1984/85	622,219	866	—	34
1985/86	652,406	961	0.1	44

Table 6.4 **School Vehicle Type by Nature of Accident 1985/86**

School Vehicle Type	Nature of Accident				Total Number of Accidents	Five Year Total (1981/82 1985/86)
	Fatal	Pupil Injury	Non-Pupil Injury	Property Damage		
School Bus	6	74	157	515	752	3,657
Van	—	28	56	121	205	714
Station Wagon	—	—	—	1	1	15
Other Buses	—	—	—	3	3	10
Total Accidents	**6**	**102**	**213**	**640**	**961**	**4,396**

Table 6.5 **Pupil Injury by Accident Event and Vehicle Type 1985/86**

School Vehicle Type	Accident Event						Total		Five Year Total (1981/82 1985/86)	
	Crossing Road		Within School Vehicle		Other					
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
School Bus	1	20	—	203	—	9	1	232	6	989
Van	—	1	—	50	—	2	—	53	2	167
Station Wagon	—	—	—	—	—	—	—	—	—	5
Other Buses	—	—	—	—	—	—	—	—	—	—
Total Accidents	**1**	**21**	**—**	**253**	**—**	**11**	**1**	**285**	**8**	**1,161**

The number of pupils travelling in school vehicles and the number of school vehicles increase each year. In the 1985/86 school year 6.2% of the fleet were involved in accidents.

In the majority of school bus accidents, the special features of the bus act to protect the pupils, and those pupil injuries incurred are mainly minimal or minor in severity. Of the 961 accidents, pupils were injured in 102 (11%) of the accidents.

6c. trucks

Table 6.6 **Class of Truck Accident 1982-1986**

Year	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
1982	375	15,896	38,780	**55,051**
1983	429	15,543	37,000	**52,972**
1984	381	17,486	41,953	**59,820**
1985	417	20,149	39,820	**60,386**
1986	416	21,337	41,142	**62,895**
Total	**2,018**	**90,411**	**165,395**	**291,124**

Table 6.7 **Driver Licence Class Required by Class of Truck Accident 1986**

Driver Licence Required	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
G	266	17,745	33,077	**51,088**
D	41	1,528	3,528	**5,097**
A**	109	2,064	4,537	**6,710**
Total	**416**	**21,337**	**41,142**	**62,895**

Drivers with a Class G licence may operate light and medium trucks, weighing up to 11,000 kilograms; drivers with a Class D licence may operate heavy straight (non-articulated) trucks; and those with Class A licences may operate articulated tractor/semi-trailer and truck-trailer combinations where the trailer is over 4,600 kilograms.

**Includes truck/trailer combinations requiring a class "A" licence.

Table 6.8 **Driver Class Required—Accidents, Registered Trucks and Accident Rate 1986**

Driver Licence Required	Accident	Registered Vehicles	Accident Rate
G	51,088	779,311	6.6
D	5,097	90,002	5.8
A*	6,473	76,832	8.4
Total	**62,658**	**946,145**	**6.6**

*Tractor/trailer combinations only.

Data for truck/trailer combinations requiring a Class "A" Driver Licence are not reported separately in the Vehicle Registation System.

Table 6.9 **Selected Factors Relevant to Fatal Truck Acidents 1986**

Factors	Driver Licence Required		
	Class G	Class D	Class A
Driver Condition in Fatal Accidents:			
Alcohol Involved	29.3%	2.4%	3.6%
Driving Properly	43.6%	61.0%	69.7%
Single Vehicle	38.0%	19.5%	13.8%
Vehicle Defect Present	17.3%	22.0%	7.3%
Urban	56.8%	63.4%	24.8%
Daylight	52.6%	80.5%	55.0%

6d. off-road vehicles

Table 6.10 **Accident Location by Off-Road Vehicle Drivers Killed and Injured 1983-1986**

Location	Killed				Injured			
	1983	1984	1985	1986	1983	1984	1985	1986
On Highway	3	7	3	6	74	51	92	106
Off Highway	4	—	7	2	85	70	112	89
Total	**7**	**7**	**10**	**8**	**159**	**121**	**204**	**195**

Table 6.11 **Accident Location by Off-Road Vehicle Passengers Killed and Injured 1983-1986**

Location	Killed				Injured			
	1983	1984	1985	1986	1983	1984	1985	1986
On Highway	1	—	1	—	13	19	23	32
Off Highway	—	—	2	3	24	16	33	23
Total	**1**	**—**	**3**	**3**	**37**	**35**	**56**	**55**

The number of off-road vehicle passengers killed and injured appears high considering that the majority of off-road vehicles are not designed to carry passengers. In addition, although on-highway use of off-road vehicles is generally prohibited, nearly half of the accidents occurred there. A total of 11 fatalities and 250 injuries involving these vehicles were reported in 1986.

Table 6.12 **Registered Off-Road Vehicles 1984-1986**

Year	Vehicles Registered
1984	28,368
1985	43,545
1986	53,943

Off-road vehicles were first required to be registered on June 1, 1984. Off-road vehicles for the purposes of this publication include dune buggies, off-road motorcyles (dirt bikes) and three and four-wheeled all terrain vehicles.

Table 6.13 **Selected Factors Relevant to All Off-Road Vehicle Accidents 1986**

Factors	%
Drivers Under 25 Years of Age	68
Alcohol Used	15
Speeding	45
Helmet Not Worn	40
Daytime	72
Three-Wheeled	55
Four-Wheeled	17

6e. motorized snow vehicles

Table 6.14 **Accident Location by Motorized Snow Vehicle Drivers Killed and Injured — Riding Seasons 1981/82-1985/86**

Location	Killed					Injured				
	81/82	82/83	83/84	84/85	85/86	81/82	82/83	83/84	84/85	85/86
On-Highway	18	4	14	8	6	299	109	193	159	192
Off-Highway	5	5	8	5	9	204	116	149	130	168
Total	**23**	**9**	**22**	**13**	**15**	**503**	**225**	**342**	**289**	**360**

Table 6.15 **Accident Location by Motorized Snow Vehicle Passengers Killed and Injured — Riding Seasons 1981/82-1985/86**

Location	Killed					Injured				
	81/82	82/83	83/84	84/85	85/86	81/82	82/83	83/84	84/85	85/86
On-Highway	2	—	2	3	—	77	42	59	43	57
Off-Highway	—	2	—	1	1	42	37	42	41	47
Total	**2**	**2**	**2**	**4**	**1**	**119**	**79**	**101**	**84**	**104**

From 1981/82 to 1985/86, 61% of motorized snow vehicle operator and passenger fatalities occurred in on-highway accidents. During the same period 56% of drivers and passengers injured were involved in on-highway accidents.

Table 6.16 **Registered Motorized Snow Vehicles 1982-1986**

Year	Registered Motorized Snow Vehicles
1982	169,385
1983	NA*
1984	169,172
1985	209,290
1986	237,806

*Not Available

Table 6.17 **Selected Factors Relevant to All Motorized Snow Vehicle Accidents 1985/86**

Factors	%
Unlicensed Operators	17
Rider Error; Speed too Fast	37
Alcohol Used	26
Surface Condition; Icy or Packed Snow	80

7 conviction and suspension data

Volumes of Highway Traffic Act convictions and suspensions were higher in 1986 compared to 1985. Much of the increase in convictions was accounted for by an 18.2% increase in speeding convictions which account for 64.3% of all convictions for Highway Traffic Act violations.

While the number of convictions for offences under the Criminal Code of Canada was lower in 1986 than in previous years it is unclear if this will be a continuing trend or is instead reflective of the introduction of revisions to the minimum mandatory suspension periods which may have impacted on court proceedings (delays, challenges, appeals). In the absence of data comparing the conviction/charge ratio for 1986 with previous years it would be inappropriate to draw conclusions from the 1986 figures.

7a. conviction data

Table 7.1 **Summary of Motor Vehicle Related Convictions 1986**

Convictions	Number
Highway Traffic Act	1,218,963
Regulation H.T.A.	2,892
Criminal Code of Canada	32,339
Municipal By-Law	28,213
Motor Vehicle Accident Claim/Compulsory Insurance Act	21,278
Others	248
Total	**1,303,933**

Table 7.2 **Motor Vehicle Convictions Related to the Highway Traffic Act 1986**

Convictions	Number
Equipment	38,185
Administrative*	85,879
Seat Belt (Driver & Passenger)	66,902
Other Non-Pointable Convictions	17
Speeding (< 16 km/h, non-pointable)	383,349
Pointable Speeding	403,463
Other Pointable Convictions (2-4 pt)	212,610
Other Pointable Convictions (5-7 pt)	19,089
Driving While Suspended	12,361
Total	**1,221,855**

*Non-moving, weight, vehicle registration, licence renewal, etc.

Table 7.3 **Motor Vehicle Convictions Related to the Criminal Code 1986***

Convictions	Number
Alcohol Related	29,552
Criminal Negligence	124
Fail to Remain at Accident	1,206
Driving While Disqualified	394
Dangerous Driving	1,063
Total	**32,339**

*This table does not include convictions of young offenders. The most frequent type of traffic convictions registered under the Criminal Code were alcohol related (91%).
The drop in the number of convictions related to the Criminal Code is unclear and may reflect the introduction of revisions to the minimum mandatory suspension periods which may in turn have impacted court proceedings.

7b. suspension data

Table 7.4 **Mandatory Suspensions Related to Criminal Code Convictions Issued 1986**

	Suspension Periods					
Suspensions	**3 Months**	**6 Months**	**1 Year**	**2 Years**	**3 Years**	**Total***
Criminal Negligence (s. 203, 204)	18	4	6	—	7	**35**
Motor Manslaughter	—	—	—	—	—	**—**
Criminal Negligence (s. 233-1)	44	12	4	—	5	**65**
Fail to Remain (s. 233-2)	280	96	559	133	89	**1,157**
Dangerous Driving	334	78	460	90	81	**1,043**
Impaired Driving (s. 234)	1,639	1,001	6,049	1,859	1,394	**11,942**
Blood/Alcohol over .08	1,834	817	8,188	1,885	1,115	**13,839**
Failure to Provide Breath Sample	393	251	886	377	348	**2,255**
Failure to Provide Roadside Breath Sample	94	36	1	—	16	**147**
Drive while Disqualified or Prohibited	—	—	339	14	2	**355**
Total	**4,636**	**2,295**	**16,492**	**4,358**	**3,057**	**30,838**

*Total issued during the calender year.

New federal and provincial laws relating to drinking and driving took effect December 20, 1985. Individuals convicted of offences which occurred prior to that date were not subject to the longer mandatory suspension periods of the new laws. Previously, the minimum suspensions imposed for a conviction for a driving violation under the Criminal Code of Canada were 3 months for a first conviction, 6 months for the second conviction within five years and 3 years for a third conviction within five years. The new minimum suspension periods are 1 year for a first conviction, 2 years for a second conviction within five years and 3 years for a third conviction within five years.

Continuing the trend of several years duration suspensions issued for a second conviction in a five year period are approximately one third of the volume of first convictions. Similarly, suspensions for a third conviction in a five year period are approximately one third the number of second convictions.

Table 7.5 **Mandatory Suspensions Related to Criminal Code Convictions at Year End 1986**

	Suspension Periods					
Suspensions	**3 Months**	**6 Months**	**1 Year**	**2 Years**	**3 Years**	**Total***
Criminal Negligence (s. 203, 204)	11	4	37	22	13	**87**
Motor Manslaughter	—	—	—	—	—	**—**
Criminal Negligence (s. 233-1)	18	12	27	16	36	**109**
Fail to Remain (s. 233-2)	37	21	581	148	282	**1,069**
Dangerous Driving	85	29	551	129	205	**999**
Impaired Driving (s. 234)	173	213	6,142	1,997	4,071	**12,596**
Blood/Alcohol over .08	149	174	8,212	1,943	2,933	**13,411**
Failure to Provide Breath Sample	36	39	885	382	987	**2,329**
Failure to Provide Roadside Breath Sample	8	7	1	2	102	**120**
Drive while Disqualified or Prohibited	—	—	354	15	2	**371**
Total	**517**	**499**	**16,790**	**4,654**	**8,631**	**31,091**

*Total as of December 31, 1986.

This table reflects the suspensions in effect at year end. The total exceeds the number of suspensions issued in 1986 due to the fact that some suspensions are in effect for more than one year.

Table 7.6 Demerit Point Suspensions by Driver Age 1986

Driver Age	Demerit Point Suspensions		
	Probationary	Non-Probationary First Accumulation	Non-Probationary Second Accumulation
16	682	—	—
17	2,627	—	—
18	3,415	14	—
19	2,345	131	2
20-24	5,246	1,787	166
25-34	2,738	1,235	116
35-44	650	405	40
45-54	209	128	8
55-64	65	53	8
65-74	11	9	1
75+	3	3	1
Total	**17,991**	**3,765**	**342**

Newly licensed drivers are covered by the probationary licence system until they have successfully completed two one-year periods of suspension free driving. Probationary drivers are suspended for 30 days after accumulating 6 or more demerit points. Non-probationary drivers are suspended for 30 days on the first accumulation of 15 demerit points and are suspended for 6 months on the second accumulation of 15 points within 2 years.

Table 7.7 Criminal Code Suspensions by Driver Age 1986

Criminal Code Suspensions	Driver Age							
	16-19	20-24	25-34	35-44	45-54	55-64	65+	Total
Criminal Negligence	8	25	29	19	9	1	2	**93**
Failure to Remain	63	340	366	145	73	42	14	**1,043**
Dangerous Driving	124	360	239	72	18	14	4	**831**
Impaired Driving	354	2,193	3,792	2,041	1,043	531	165	**10,119**
Blood/Alcohol over .08	520	3,118	4,330	2,028	965	488	145	**11,594**
Failure to Provide Breath Sample	23	272	619	387	162	76	16	**1,555**
Failure to Provide Roadside Breath Sample	—	38	48	31	24	4	1	**146**
Total	**1,092**	**6,346**	**9,423**	**4,723**	**2,294**	**1,156**	**347**	**25,381**

Twenty-five to thirty-four year olds received the highest number of criminal code convictions. This group is also the largest in the driver population. Only the suspensions issued under the previous legislation are recorded here. While the figures are not definitive, they are believed to be representative.

8 appendix

8a. glossary of terms

Ability Impaired by Alcohol:
Driving while one's ability is impaired by alcohol or driving with a blood alcohol concentration exceeding 80 milligrams in 100 millilitres of blood.

Class L Driver's Licence:
The learner's licence that allows the holder to drive any motor vehicle that requires a class G driver's licence (e.g. an automobile) on the road, providing that the holder of a class G licence or any other higher licence class (A, B, C, D, E, and F) is occupying the seat beside him/her for the purpose of giving instruction.

Class R Driver's Licence:
The learner's licence that allows the holder to operate a motorcycle for the purposes of training. Class R licensed motorcyclists are prohibited from nighttime riding, carrying passengers and travelling on high speed highways with the exceptions of Highways 11 and 17.

Conviction:
Awarded when a person pleads guilty to, or is found guilty of, an offence related to a motor vehicle under any Act of the Ontario Legislature or its accompanying regulations, under the Parliament of Canada or any accompanying order, or under any municipal by-law.

Driver:
Unless specified otherwise, any person, whether licensed or not, considered to be in care and control of a motor vehicle at the time of an accident.

Fatal Accident:
A motor vehicle accident in which at least one person sustains bodily injuries resulting in death.*

Had Been Drinking:
Driving after having drunk an amount of alcohol not considered sufficient to be legally impairing or with a measured blood alcohol count of greater than zero but less than 80 milligrams.

Highway:
A common and public highway, street, avenue etc., any part of which is intended for public use or used by the general public for the passage of vehicles and including the area between the property lines.

Kilometres Travelled:
Vehicle fleet mileage is estimated on the basis of taxed gasoline and motor fuel sales. Total litres sold are converted to kilometres travelled based on a conversion factor of 22.0 kilometres per gallon.

Major Injury:
A non-fatal injury severe enough to require that the injured person be admitted to hospital, even if for observation only.

Minimal Injury:
A non-fatal injury, including minor abrasions and bruises, which does not necessitate the injured person going to a hospital.

Minor Injury:
A non-fatal injury requiring medical treatment at a hospital emergency room, but not requiring hospitalization of the involved person.

Motor Vehicle Accident:
Any incident in which bodily injury or damage to property is sustained as a result of the movement of a motor vehicle, or of its load while a motor vehicle is in motion.

Off-Highway Accidents:
An off-highway accident involving any of the motorized vehicles which are covered by legislation under the Highway Traffic Act, the Motorized Snow Vehicles Act, and the Off-Road Vehicles Act.

On-Highway Accidents:
A motor vehicle accident which occurs on the highway, between the property lines.

Pedestrian:
Any person not riding in or on a vehicle involved in a motor vehicle accident.

Personal Injury Accident:
A motor vehicle accident in which at least one person involved sustains bodily injuries not resulting in death.

Property Damage Accident:
A motor vehicle accident in which no person sustains bodily injury, but in which there is damage to any public property or damage to private property** including damage to the motor vehicle or its load.

Reportable Accident:
Any fatal or injury accident, or any accident in which there is any damage to public property or damage to private property in excess of a monetary value prescribed in law.**

Suspension:
Withdrawal of a driver's privilege to operate a motor vehicle for a prescribed period of time.

*Prior to January 1, 1982, fatal accident statistics included deaths attributed to accidental injuries up to one year after the accident. Since that date, only deaths from injuries within thirty days of the accident have been included.

**The minimum reportable level for property damage only accidents rose from $200 to $400 on January 1, 1978 and rose again to $700 on January 1, 1985.

8b. ministry of transportation and communications highway safety publications

Driver's Handbooks
The Driver's Handbook
Driver's Manual for Adult New Readers
Motorcycle Driver's Manual
School Bus Manual
Truck and Bus Manual
Recreational Vehicles Handbook
The Bicyclist's Handbook

Driver Instruction
Roadworthy (Textbook, Classroom Teacher's Manual, In-Car Teacher's Manual)

Drinking and Driving
Drinking and Driving — Smashed (Pamphlet)
Drinking, Driving and the Law (Slide Presentation)
Three For the Road: 1. Power Under Control
2. The Alcohol You 3. No Thanks I'm Driving (Film Trilogy)

Seat Belts and Child Restraints
What You Should Know About Seat Belts (Pamphlet)
Seat Belt (Poster)
Life Is Precious (Child Restraint Pamphlet, Poster)
Protect Your Children (Pamphlet)
Child Restraint Manual (Manual for Educators and Persons Organizing Rental Programs)
Seat Belt-Fairy Car Father (Teacher's Handbook, Comic Book, Decals)
The Human Collision (Film)
Dice In A Box (Film)
Life Is Precious — Buckle Them In (Film)
Citizen Seat Belt (Film)

Motorcycles
Ontario Motorcycling Facts (Pamphlet)
All Those Who Like To Ride ... (Drinking and Riding Poster)

School Vehicles
School Bus Stopping Law (Pamphlet, Poster)
Driver Improvement Course for School Bus Drivers (Instructor's Manual, Test Sheets and Certificates)
School Bus Drivers Have A Big Responsibility (Folder, Pamphlet)
How We Ride (Colouring Book, Poster)
Duties of Patrollers (Folder)
Sam the Safety Duck — On the Buses (Pamphlet, Film, Decals)
Death Zones (Film)

Off-Road Vehicles and Motorized Snow Vehicles
1985 Ontario Off-Road Vehicle Statistics (Pamphlet)
1985/86 Ontario Motorized Snow Vehicle Facts (Pamphlet)

Bicycles
Bicycle Safety Program (Instructor's Manual, and Supplies)
Sam the Safety Duck — Bicycle Safety (Film)
Bicycle Safety — Teens and Adults (Posters)

General
Good Driving Practices (Pamphlet)
Guide for Disabled Drivers (Pamphlet)
Pedestrians (Pamphlet, Poster)
Senior Citizens (Pamphlet)
Winter Driving Tips (Pamphlet)
Sam the Safety Duck — On Winter Safety (Film)
Power Under Control: Limits of Performance (Winter Driving Film)
Seconds Can Save (Pamphlet)
Daytime Driving Lights (Poster and Pamphlet)

NOTE: For copies of any of this material contact:
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